

# THE AMERICAN PSYCHOLOGIST

THE AMERICAN PSYCHOLOGICAL ASSOCIATION, INC.



## *New* **McGraw-Hill** Books

### **PSYCHOLOGY**

By ROSS STAGNER, University of Illinois, and T. F. KARWOSKI, Dartmouth College. 582 pages, \$5.00

### **PSYCHOLOGY IN INDUSTRY**

By J. STANLEY GRAY, University of Georgia. *McGraw-Hill Publications in Psychology*. 401 pages, \$5.00

### **READINGS IN INDUSTRIAL AND BUSINESS PSYCHOLOGY**

By H. W. KARN and B. VON H. GILMER, Carnegie Institute of Technology. *McGraw-Hill Publications in Psychology*. 476 pages, \$4.50

### **PERSONALITY MEASUREMENT**

By LEONARD W. FERGUSON, Aetna Life Insurance Company. *McGraw-Hill Publications in Psychology*. 457 pages, \$6.00

### **THE PSYCHOLOGY OF LEARNING**

By JAMES DEESE, The Johns Hopkins University. *McGraw-Hill Publications in Psychology*. 396 pages, \$5.50

### **THE MEASUREMENT OF HEARING**

By IRA J. HIRSH, Central Institute for the Deaf and Washington University. *McGraw-Hill Publications in Psychology*. 364 pages, \$6.00

### **THE EMPLOYMENT INTERVIEW IN INDUSTRY**

By NEWELL C. KEPHART, Purdue University. 277 pages, \$4.50

### **THE PSYCHOLOGY OF THINKING**

By EDGAR W. VINACKE, University of Hawaii. *McGraw-Hill Publications in Psychology*. 392 pages, \$5.50

### **FUNDAMENTAL CONCEPTS OF CLINICAL PSYCHOLOGY**

By G. WILSON SHAFFER and RICHARD S. LAZARUS, The Johns Hopkins University. *McGraw-Hill Publications in Psychology*. 540 pages, \$6.00

### **ADOLESCENCE**

By MARGUERITE MALM and OLIS G. JAMISON, Indiana State Teachers College. 512 pages, \$5.00

### **COLLEGE AND LIFE**

By MARGARET E. BENNETT, Pasadena Junior College. Fourth edition. 457 pages, \$4.50

### **MENTAL HYGIENE FOR CLASSROOM TEACHERS**

By H. W. BERNARD, Oregon State System of Higher Education. 472 pages, \$4.75

### **THE DYNAMICS OF COUNSELING**

By EVERETT L. SHOSTROM, George Pepperdine College, and LAWRENCE M. BRAMMER, Sacramento State College. 213 pages, \$3.50

### **ADOLESCENCE AND YOUTH**

By PAUL H. LANDIS, State College of Washington. Second edition. 482 pages, \$5.00

*Send for copies on approval*



**McGraw-Hill Book Company, Inc.**

330 WEST 42ND STREET, NEW YORK 18, N. Y.

# THE AMERICAN PSYCHOLOGIST

The Professional Journal of the American Psychological Association, Inc.

Volume 8

January, 1953

Number 1

## *In this Issue*

What Is Information Measurement? GEORGE A. MILLER .....	3
Training Facilities and Financial Assistance for Graduate Students in Psychology: 1953-1954. OFFICE OF THE EXECUTIVE SECRETARY, AMERICAN PSYCHOLOGICAL ASSOCIATION .....	12
New Associates of the American Psychological Association. APA BOARD OF DIRECTORS .....	42
Comment .....	48
The Interest in the Practice of Psychotherapy. CARL R. ROGERS	
Analysis of Industrial Psychology Courses. ADAM PORUBEN, JR.	
Necessity for Publicly Supported Psychological Clinics. ALEXANDER MILTON	
Psychologist, Know Thyself! ROBERT F. CREEGAN	
Across the Secretary's Desk .....	54
Psychology and the Law	
The New Building	
1953 Journal Subscriptions	
New Associates	
Psychological Notes and News .....	56
Convention Calendar .....	60

*Editor:* Fillmore H. Sanford

*Managing Editor:* Lorraine Bouthilet

*Advisory Editors:* Rensis Likert, Jean W. Macfarlane, and Arthur W. Melton

THE AMERICAN PSYCHOLOGIST is published monthly by the American Psychological Association, Inc., at Prince and Lemon Streets, Lancaster, Pennsylvania. Subscription: \$8.00, single copy \$1.00. Communications on business matters should be addressed to Publishers, The American Psychologist, Prince and Lemon Streets, Lancaster, Pennsylvania, or the American Psychological Association, Inc., 1333 Sixteenth St. N.W., Washington 6, D. C. Address communications on editorial matters to 1333 Sixteenth St. N.W., Washington 6, D. C.

Entered as second-class matter January 12, 1950 at the Post Office at Lancaster, Pa., under the Act of March 3rd, 1879. Acceptance for mailing at special rate of postage provided for in paragraph (d-2), section 34.40, P. L. and R. of 1948, authorized August 6, 1947.

## OFFICERS OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

### President

LAURANCE F. SHAFFER  
Teachers College, Columbia University  
New York 27, N. Y.

### President-elect

O. HOBART MOWRER  
University of Illinois  
Urbana, Illinois

### Past President

J. McV. HUNT  
University of Illinois  
Urbana, Illinois

### Recording Secretary

ANNE ANASTASI  
Fordham University  
New York 58, New York

### Treasurer

CARROLL L. SHARTLE  
Human Resources Research Institute  
Maxwell Air Force Base

### Executive Secretary

FILLMORE H. SANFORD  
1333 Sixteenth St. N.W.  
Washington 6, D. C.

### Board of Directors

THE PRESIDENT, THE PRESIDENT-ELECT, THE PAST PRESIDENT  
THE RECORDING SECRETARY, THE TREASURER, THE EXECUTIVE SECRETARY, AND

LEE J. CRONBACH  
PAUL R. FARNSWORTH  
NICHOLAS HOBBS

RENSIS LIKERT  
JEAN W. MACFARLANE  
ARTHUR W. MELTON

All general communications, inquiries concerning membership, letters concerning dues, subscriptions, and changes of address, announcement of posts, and requests for placement should be directed to:

AMERICAN PSYCHOLOGICAL ASSOCIATION, INC.  
1333 Sixteenth Street N.W.  
Washington 6, D. C.

## PUBLICATIONS OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

### AMERICAN PSYCHOLOGIST

*Editor:* FILLMORE H. SANFORD, *American Psychological Association*. Contains all official papers of the Association and articles concerning psychology as a profession; monthly.

Subscription: \$8.00 (Foreign \$8.50). Single copies, \$1.00.

### JOURNAL OF ABNORMAL AND SOCIAL PSYCHOLOGY

*Editor:* J. McV. HUNT, *University of Illinois*. Contains original contributions in the field of abnormal and social psychology, reviews, and case reports; quarterly.

Subscription: \$7.00 (Foreign \$7.50). Single copies, \$2.00.

### JOURNAL OF APPLIED PSYCHOLOGY

*Editor:* DONALD G. PATERSON, *University of Minnesota*. Contains material covering applications of psychology to business, industry, and education; bimonthly.

Subscription: \$7.00 (Foreign \$7.50). Single copies, \$1.50.

### JOURNAL OF COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY

*Editor:* HARRY F. HARLOW, *University of Wisconsin*. Contains original contributions in the field of comparative and physiological psychology; bimonthly.

Subscription: \$8.00 (Foreign \$8.50). Single copies, \$1.50.

### JOURNAL OF CONSULTING PSYCHOLOGY

*Editor:* LAURANCE F. SHAFFER, *Teachers College, Columbia University*. Contains articles in the field of clinical and consulting psychology, counseling and guidance; bimonthly.

Subscription: \$7.00 (Foreign \$7.50). Single copies, \$1.25.

### JOURNAL OF EXPERIMENTAL PSYCHOLOGY

*Editor:* ARTHUR W. MELTON, *HRRC, Lackland Air Force Base, San Antonio, Texas*. Contains original contribution of an experimental character; monthly.

Subscription: \$15.00 (Foreign \$15.50). Single copies, \$1.50.

### PSYCHOLOGICAL ABSTRACTS

*Editor:* C. M. LOUETTIT, *University of Illinois*. Contains noncritical abstracts of the world's literature in psychology and related subjects; monthly.

Subscription: \$8.00 (Foreign \$8.50). Single copies, \$1.00.

### PSYCHOLOGICAL BULLETIN

*Editor:* WAYNE DENNIS, *Brooklyn College*. Contains critical reviews of psychological literature, methodological articles, book reviews, and discussions of controversial issues; bimonthly.

Subscription: \$8.00 (Foreign \$8.50). Single copies, \$1.50.

### PSYCHOLOGICAL MONOGRAPHS: GENERAL AND APPLIED

*Editor:* HERBERT S. CONRAD, *U. S. Office of Education*. Contains longer researches and laboratory studies which appear as units; published at irregular intervals, about twelve numbers per year.

Subscription: \$7.00 per volume (Foreign \$7.50). Single copies, price varies according to size.

### PSYCHOLOGICAL REVIEW

*Editor:* CARROLL C. PRATT, *Princeton University*. Contains original contributions of a theoretical nature; bimonthly.

Subscription: \$6.50 (Foreign \$7.00). Single copies, \$1.25.



# WHAT IS INFORMATION MEASUREMENT?

GEORGE A. MILLER

*Massachusetts Institute of Technology*

IN recent years a few psychologists, whose business throws them together with communication engineers, have been making considerable fuss over something called "information theory." They drop words like "noise," "redundancy," or "channel capacity" into surprising contexts and act like they had a new slant on some of the oldest problems in experimental psychology. Little wonder that their colleagues are asking, "What is this 'information' you talk about measuring?" and "What does all this have to do with the general body of psychological theory?"

The reason for the fuss is that information theory provides a yardstick for measuring organization. The argument runs like this. A well-organized system is predictable—you know almost what it is going to do before it happens. When a well-organized system does something, you learn little that you didn't already know—you acquire little information. A perfectly organized system is completely predictable and its behavior provides no information at all. The more disorganized and unpredictable a system is, the more information you can get by watching it. Information, organization, and predictability room together in this theoretical house. The key that unlocks the door to predictability is the theory of probability, but once this door is open we have access to information and organization as well.

The implications of this argument are indeed worth making a fuss about. Information, organization, predictability, and their synonyms are not rare concepts in psychology. Each place they occur now seems to be enriched by the possibility of quantification. One rereads familiar passages with fresh excitement over their experimental possibilities. Well-worn phrases like "perceptual organization," "the disorganizing effects of emotion," "knowledge of results," "stereotyped behavior," "reorganization of the problem materials," etc., begin to leap off the pages.

In the first blush of enthusiasm for this new toy it is easy to overstate the case. When Newton's mechanics was flowering, the claim was made that

animals are nothing but machines, similar to but more complicated than a good clock. Later, during the development of thermodynamics, it was claimed that animals are nothing but complicated heat engines. With the development of information theory we can expect to hear that animals are nothing but communication systems. If we profit from history, we can mistrust the "nothing but" in this claim. But we will also remember that anatomists learned from mechanics and physiologists profited by thermodynamics. Insofar as living organisms perform the functions of a communication system, they must obey the laws that govern all such systems. How much psychology will profit from this obedience remains for the future to show.

Most of the careless claims for the importance of information theory arise from overly free associations to the word "information." This term occurs in the theory in a careful and particular way. It is not synonymous with "meaning." Only the *amount* of information is measured—the amount does not specify the content, value, truthfulness, exclusiveness, history, or purpose of the information. The definition does not exclude other definitions and certainly does not include all the meanings implied by the colloquial usages of the word. This garland of "nots" covers most of the objectionable exaggerations. In order to demonstrate some properly constrained associations to the word "information," we need to begin with definitions of some basic concepts.

## BASIC CONCEPTS

*Amount of information.* A certain event is going to occur. You know all the different ways this event can happen. You even know how probable each of these different outcomes is. In fact, you know everything about this event that can be learned by watching innumerable similar events in the past. The only thing you don't know is exactly which one of these outcomes will actually happen.

Imagine a child who is told that a piece of candy is under one of 16 boxes. If he lifts the right box, he can have the candy. The event—lifting one of the boxes—has 16 possible outcomes. In order to pick the right box, the child needs information. Anything we tell him that reduces the number of boxes from which he must choose will provide some of the information he needs. If we say, "The candy is not under the red box," we give him just enough information to reduce the number of alternatives from 16 to 15. If we say, "The candy is under one of the four boxes on the left end," we give more information because we reduce 16 to 4 alternatives. If we say, "The candy is under the white box," we give him all the information he needs—we reduce the 16 alternatives to the one he wants.

The amount of information in such statements is a measure of how much they reduce the number of possible outcomes. Nothing is said about whether the information is true, valuable, understood, or believed—we are talking only about *how much* information there is.

*Bit.* A perfectly good way to measure the amount of information in such statements (but not the way we will adopt) is merely to count the number of possible outcomes that the information eliminates. Then the rule would be that every time one alternative is eliminated, one unit of information is communicated.

The objection to this unit of measurement is intuitive. Most people feel that to reduce 100 alternatives to 99 is less helpful than to reduce two alternatives to one. It is intuitively more attractive to use ratios. The amount of information depends upon the fraction of the alternatives that are eliminated, not the absolute number. In order to convey the same amount of information, the 100 alternatives should be reduced by the same fraction as the two alternatives, that is to say, from 100 to 50.

Every time the number of alternatives is reduced to half, one unit of information is gained. This unit is called one "bit" of information. If one message reduces  $k$  to  $k/x$ , it contains one bit less information than does a message that reduces  $k$  to  $k/2x$ . Therefore, the amount of information in a message that reduces  $k$  to  $k/x$  is  $\log_2 x$  bits.

For example, if the child's 16 boxes are reduced to two, then  $x$  is 8 and  $\log_2 8$  is three bits of information. That is to say, 16 has been halved

three times: 16 to 8, 8 to 4, and 4 to 2 alternative outcomes.

*Source.* The communication engineer is seldom concerned with a particular message. He must provide a channel capable of transmitting any message that a source may generate. The source selects a message out of a set of  $k$  alternative messages that it might send. Thus each time the source selects a message, the channel must transmit  $\log_2 k$  bits of information in order to tell the receiver what choice was made.

If some messages are more probable than the others, a receiver can anticipate them and less information needs to be transmitted. In other words, the frequent messages should be the short ones. In order to take account of differences in probability, we treat a message whose probability is  $p$  as if it was selected from a set of  $1/p$  alternative messages. The amount of information that must be transmitted for this message is, therefore,  $\log_2 1/p$ , or  $-\log_2 p$ . (Note that if all  $k$  messages are equally probable,  $p = 1/k$  and  $-\log_2 p = \log_2 k$ , which is the measure given above.) In other words, some messages that the source selects involves more information than others. If the message probabilities are  $p_1, p_2, \dots, p_k$ , then the amounts of information associated with each message are  $-\log_2 p_1, -\log_2 p_2, \dots, -\log_2 p_k$ .

*Average amount of information.* Since we want to deal with sources, rather than with particular messages, we need a measure to represent how much information a source generates. If different messages contain different amounts of information, then it is reasonable to talk about the average amount of information per message we can expect to get from the source—the average for all the different messages the source may select. This expected value from source  $x$  is denoted  $H(x)$ :

$$H(x) = \text{the mean value of } (-\log_2 p_i) \\ = \sum_{i=1}^k p_i (-\log_2 p_i)$$

This is the equation that occurs most often in the psychological applications of information theory.  $H(x)$  in bits per message is the mean logarithmic probability for all messages from source  $x$ . In all that follows we shall be talking about the average amount of information expected from a source, and not the exact amount in any particular message.

*Related sources.* Three gentlemen—call them Ecks, Wye, and Zee—are each making binary choices. That is to say, Ecks chooses either heads or tails and simultaneously Wye also makes a choice and so does Zee. They repeat their synchronous choosing over and over again, varying their choices more or less randomly on successive trials. Our job is to predict what the outcome of this triple-choice event will be.

With no more description than this we know that there are eight ways the triple-choice can come out: HHH, HHT, HTH, HTT, THH, THT, TTH, and TTT. Thus our job is to select one out of these eight possible outcomes. If all eight were equally probable, we would need three bits of information to make the decision.

Now suppose that Ecks tells us each time what his next choice is going to be. With Ecks out of the way we are left with only four combinations of double-choices by Wye and Zee, so we can gain one bit of information about the triple-choice from Ecks. Similarly, if Wye tells us what his choice is going to be, that can also be worth one bit of information. Now the question is this: If Ecks and Wye both tell us what they are going to do, how much information do we get?

Case I: Suppose that it turns out that Ecks and Wye are perfectly correlated. In other words, if we know what Ecks will do, we also know what Wye will do, and vice versa. Given the information from either one of them, the other one has no further information to add. Thus the most we can get from both is exactly the same as what we would get from either one alone. Note that if Ecks and Wye always make the same choice, there are actually only four possible outcomes: HHH, HHT, TTH, and TTT, so we need only two bits to select the outcome.)

Case II: Next, suppose that Ecks and Wye make their choices with complete independence. Then a knowledge of Ecks' choice tells us absolutely nothing about what Wye is going to do, and vice versa. None of the information from one is duplicated by the other. Thus, if we get one bit from Ecks and one bit from Wye, and if there is no common information at all, we must get two whole bits of information from both of them together.

Case III: Finally, suppose that, as will usually be the case when we apply these ideas, Ecks and Wye are partially but not perfectly correlated. If we know what Ecks will do, we can make a fairly

reliable guess what Wye will do, and vice versa. Some but not all of the information we get from Ecks duplicates the information we get from Wye. This case falls in between the first two: the total information is greater than either of its parts, but less than their sum.

The situation in Case III is pictured in Fig. 1. The left circle is the information we get from Ecks and the right circle is the information from Wye. The symbols  $H(x)$  and  $H(y)$  denote the average amounts of information in bits per event expected from sources Ecks and Wye respectively. The overlap of the two circles represents the common information due to the correlation of Ecks and Wye and its average amount in bits per event is symbolized by  $T$ . The left half of the left circle is information from Ecks alone, and the right half of the right circle is information from Wye alone. The symbols  $H_v(x)$  should be taken to mean the average amount of information per event that remains to be gotten from source Ecks after Wye is already known. The total area enclosed in both circles together represents all the information that both Ecks and Wye can provide. This total amount in bits per event is symbolized by  $H(x,y)$ .

$H(x)$  is calculated from the probabilities of Ecks' choices according to the equation given above. The same equation is used to calculate  $H(y)$  from the probabilities for Wye's choices. And the same equation is used a third time to calculate  $H(x,y)$  from the joint probabilities of the double-choices by Ecks and Wye together. Then all the other quantities involved can be calculated by simple arithmetic in just the way Fig. 1 would suggest. For example:

$$H_v(x) = H(x,y) - H(y)$$

or  $T = H(x) + H(y) - H(x,y).$

It will be seen that  $T$  has the properties of a measure of the correlation (contingency, dependence) between Ecks and Wye. In fact,  $1.3863 nT$  (where  $n$  is the number of occurrences of the event that you use to estimate the probabilities involved) is essentially the same as the value of chi square you would compute to test the null hypothesis that Ecks and Wye are independent.

These are the basic ideas behind the general theory. There are many ways to adapt them to specific situations depending on the way the elements of the specific situation are identified with the several variables of the theory. In general, how-



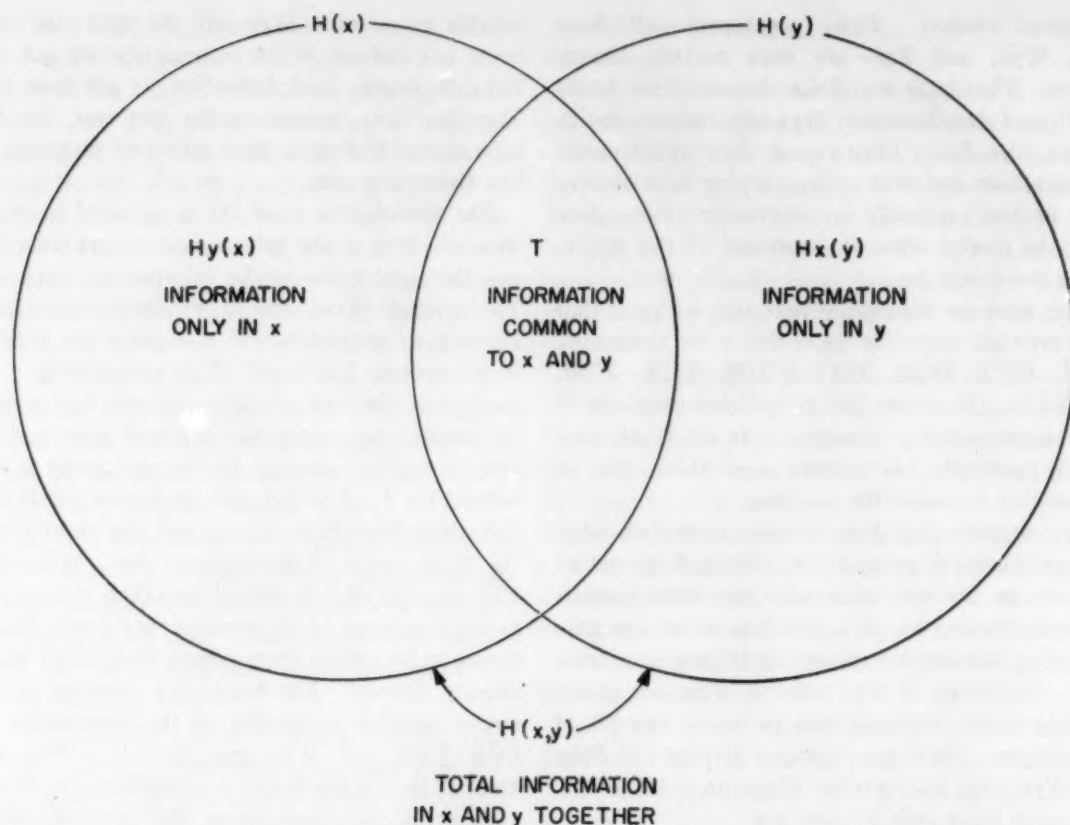


FIG. 1. Schematic representation of the several quantities of information that are involved when messages are received from two related sources.

ever, most applications of the theory seem to fall into one or the other of two types. I shall refer to these two as the *transmission situation* and the *sequential situation*.

#### THE TRANSMISSION SITUATION

When information is communicated from one place to another, it is necessary to have a channel over which it can travel. If you put a message in at one end of the channel, another message comes out the other end. So the communication engineer talks about the "input" to the channel and the "output" from the channel. For a good channel, the input and the output are closely related but usually not identical. The input is changed, more or less, in the process of transmission. If the changes are random, the communication engineer talks about "noise" in the channel. Thus the output depends upon both the input and the noise.

Now we want to identify the variables in this transmission situation with the various quantities of information pictured in Fig. 1. In order to do

this, we let  $x$  be the source that generates the input information and let  $y$  be the source that generates the output information. That is to say,  $y$  is the channel itself. Since  $x$  and  $y$  are related sources of information, the overlap or common information is what is transmitted.  $H(x)$  is the average amount of input information,  $H(y)$  is the average amount of output information, and  $T$  is the average amount of transmitted information. (To keep terms uniform, we might refer to  $T$  as the average amount of "throughput" information.)

What interpretation can we give to  $H_y(x)$  and  $H_x(y)$ ?  $H_y(x)$  is information that is put in but not gotten out—it is information *lost* in transmission.  $H_y(x)$  is often called "equivocation" because a receiver cannot decide whether or not it was sent. Similarly,  $H_x(y)$  is information that comes out without being put in—it is information *added* in transmission.  $H_x(y)$  is called "noise" with the idea that the irrelevant parts of the output interfere with good communications.



Finally,  $H(x,y)$  is the total amount of information you have when you know both the input and the output. Thus  $H(x,y)$  includes the lost, the transmitted, and the added information,

$$H(x,y) = H_y(x) + T + H_x(y),$$

equivocation plus transmission plus noise.

This interpretation of the basic concepts of information theory is ordinarily used with the object of computing  $T$ , the amount of information transmitted by the channel. A characteristic of most communication channels is that there is an upper limit to the amount of information they can transmit. This upper limit is called the "channel capacity" and is symbolized by  $C$ . As the amount of information in the input is increased, there comes a point at which the amount of transmitted information no longer increases. Thus as  $H(x)$  increases,  $T$  approaches an upper limit,  $C$ . This situation is shown graphically in Fig. 2, where  $T$  is plotted as a function of  $H(x)$ .

The obvious psychological analogy to the transmission situation is between the subject in an experiment and a communication channel, between stimuli and inputs, and between responses and outputs. Then  $H(x)$  is the stimulus information,  $H(y)$  is the response information, and  $T$  measures the degree of dependence of responses upon stimuli. It turns out that  $T$  can be considered as a measure of discrimination, and  $C$  is the basic capacity of the subject to discriminate among the given stim-

uli. That is to say,  $C$  can be interpreted as a sort of modern version of the traditional Weber-fraction.

In order to explain how  $T$  and  $C$  measure the discriminative abilities of the subject, a simple example is useful. Imagine a subject can discriminate perfectly among four classes of stimuli. Any two stimuli in the same class are indistinguishable to him, but two stimuli from different classes are never confused. If we pick the stimuli carefully from different classes, therefore, he can distinguish perfectly which one of two, of three, or of four alternative stimuli we present. However, there is no way we can pick five or more stimuli so that he can discriminate them without any mistakes; at least two must be from the same class and so will be confused. If we select  $k$  stimuli to test him with, the best he can do is to reduce  $k$  to  $k/4$  by saying which of his four classes each stimulus belongs in. He can never reduce the range of possible inputs to less than  $k/4$ . Thus his channel capacity,  $C$ , is  $\log_2 4$ , or 2 bits, and this is the maximum value of  $T$  we can get from him. Since  $2^C$  is the maximum number of discriminably different classes of stimuli for this subject,  $C$  is a measure of his basic discriminative capacity.

Another psychological analogy to the transmission situation arises in mental testing. A test is a device for discriminating among people, with respect to some psychological dimension. Each person who takes the test has some true value on this dimension. The result of the test is a score that will, with more or less accuracy, tell us what this value is. So we can think of the test as a communication channel. The true values are the input information, and the test scores are the output information. If it is a good test, if  $T$  is large and the noise,  $H_x(y)$ , is small, then the test may discriminate rather accurately among the people who take it. In other words,  $2^T$  would tell us how many classes of people we can distinguish by using this test.

It requires only a slight extension of this analogy to see the similarity between any process of measurement and the transmission situation. Nature provides the input, the process of measurement is the channel, and the measurements themselves are the output. In this context, the information of the communication engineer is quite similar to the information that R. A. Fisher defined many years ago and used as the foundation for his development of a theory of statistical inference. Considered in this

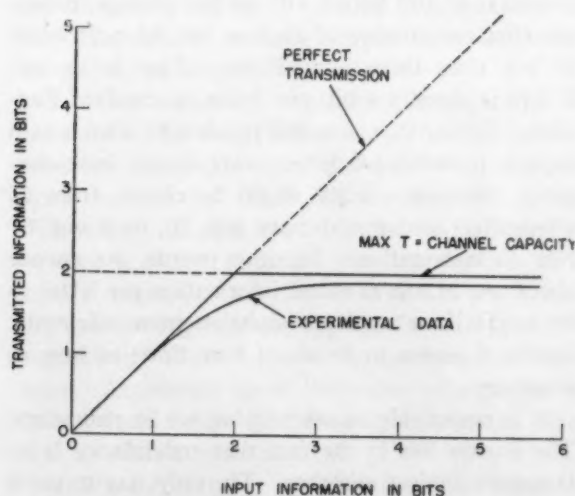


FIG. 2. Illustrative graph showing the amount of transmitted information as a function of the amount of input information for a system with a channel capacity of 2 bits.

sense, the possible applications of information theory are as broad as scientific measurement itself.

For the psychologist interested in the construction of scales of measurement, information theory will be a valuable tool. He will find that most of the things it tells him he could have learned just as well by more traditional statistical procedures, but the analogy to the transmission situation will undoubtedly stimulate insights and suggest new approaches to old problems.

#### THE SEQUENTIAL SITUATION

In all that has been said so far it has been implicitly assumed that successive occurrences of the event are independent. When we are dealing with behavioral processes, this assumption is never better than a first approximation. What we are going to do is conditioned by what we have just done, whether we are carrying out the day's work, writing a letter, or producing a random sequence of digits.

Although any behavioral sequence can be analyzed to discover its conditional probabilities, the most interesting example is our own verbal behavior. To take an obvious case, imagine that you are typing a letter and that you have just typed, "I hope we will see you again very." You need at least one more word to complete the sentence. You cannot open the dictionary at random to get this next word. The whole context of the sentence constrains your freedom of choice. The next word depends on the preceding words. Your most probable choice is "soon," although you might choose "often" or "much." You will certainly not choose "bluejay," or "the," or "take," etc. The effect of these constraints built into normal English usage is to reduce the number of alternatives from which successive words are chosen. We have already seen that when the number of possible outcomes of a choice is reduced, some information has been communicated. That is to say, by reducing the range of choice, the context gives us information about what the next item is going to be. Thus when the next word occurs, some of the information it conveys is identical with information we have already received from the context. This repeated information is called "redundancy."

How can the variables in this sequential situation be identified with the various quantities of information pictured in Fig. 1? In order to relate them we let  $x$  be the source that generates the context and let  $y$  be the source that generates the next word.

Since  $x$  and  $y$  are related sources of information, the overlap or common information from  $x$  and  $y$  is the redundancy.  $H(x)$  is the average amount of information in the first  $n - 1$  words (the context),  $H(y)$  is the average amount of information in the  $n$ th word, and  $T$  is the average amount of redundant information.  $H_y(x)$  is the average amount of information in the context that is unrelated to the next word.  $H_x(y)$  is the average amount of information in the next word that cannot be obtained from the context.  $H(x, y)$  is the total amount of information we have when all  $n$  words, the context plus the next word, are known.

When this interpretation of the basic concepts is used, the quantity of major interest is ordinarily  $H_x(y)$ , the average amount of information per word when the context is known.  $H_x(y)$  can be thought of as the additional information we can expect from each new word in the sequence. Thus  $H_x(y)$  is closely related to the *rate* at which information is generated by the source; it measures the average number of bits per unit (per word).

If the successive units in a sequence are chosen independently, then the redundancy  $T$  is zero and the context tells us nothing about the next unit. If the next unit is completely determined by the context—for example, in English a "q" is always followed by "u"—then the new information  $H_x(y)$  is zero and the occurrence of the next unit adds nothing to what we already know.

Sequences of letters in written English have been studied with this model. It has been estimated that a context of 100 letters will, on the average, reduce the effective number of choices for the next letter to less than three possibilities. That is to say,  $H_x(y)$  is about 1.4 bits per letter in standard English. We can compare this result with what would happen if successive letters were chosen independently; then each letter would be chosen from 26 alternatives and would carry  $\log_2 26$ , or about 4.7 bits of information. In other words, we encode about one-fourth as much information per letter as we might if we used our alphabet more efficiently. Our books seem to be about four times as long as necessary.

It is reasonable to ask why we are so redundant. The answer lies in the fact that redundancy is an insurance against mistakes. The only way to catch an error is to repeat. Redundant information is an automatic mistake-catcher built into all natural languages. Of course, if there is no chance of error,

then there is no need for redundancy. The large amount of redundancy that we seem to insist on reflects our basic inefficiency as information-handling systems. Compared with the thousands or millions of bits per second that electronic devices can handle, man's performance figures (always less than 50 bits per second and usually much lower if memory is involved) can charitably be called puny. By making our languages redundant we are able to decrease the rate,  $H_x(y)$ , to a point where we can cope with what is being said.

Knowledge of the redundancy of English is knowledge about our verbal habits. Since so much of man's behavior is conditioned by these verbal habits, any way to measure them should interest a psychologist. For example, a verbal learning experiment might compare the memorization of ten consonant-vowel-consonant nonsense syllables (30 letters in all) with the memorization of a 30-letter sentence from English text. Since the successive letters in the nonsense syllables are effectively independent, the learner faces many more possible sequences than he does if he knows that the 30 letters are English text. Since he has already learned the redundancies of English, he is required to assimilate less new information from the sentences than from the nonsense syllables. A knowledge of the information in sequences of letters in English text thus gives us an independent, quantitative estimate of previous learning. In short, the sequential application of information concepts enables us to calibrate our verbal learning materials and so to control in a quantitative way factors that we have always discussed before in qualitative terms.

It is not necessary to confine the sequential interpretation to verbal behavior. It can be applied whenever an organism adopts a reasonably stable "course of action" that can be described probabilistically. If the course of action is coherent in such a way that future conduct depends upon past conduct, we say the behavior is predictable or, to some degree, stereotyped. In such cases, the redundancy  $T$  can be used to measure the stereotypy. Arguments about the degree of organization in emotional behavior, for example, might be clarified by such a measure.

Taken together, the sequential and the transmission situations suggest a wide range of possible applications in psychology. The idea of reviewing some of the applications already made by psychol-

ogists is tempting, but space prevents it here. The reader who wants to follow up these ideas in more concrete terms should find the annotated references given below a good starting point.

#### SELECTED REFERENCES

The following is not a complete bibliography, but should include most of the papers of direct interest to psychologists.

- ABORN, M., & RUBENSTEIN, H. Information theory and immediate recall. *J. exp. Psychol.*, 1952, **44**, 260-266. Artificial languages with varying degrees of contextual constraint were constructed and passages from these languages were memorized. For the less organized languages, the amount of information remembered was a constant.
- CHERRY, E. C. A history of the theory of information. *Proc. Inst. elect. Engineers*, 1951, **98**, 383-393. This scholarly and interesting paper puts the theory in historical context and contains a valuable bibliography.
- DOLANSKY, L., & DOLANSKY, M. P. *Table of  $\log_2 1/p$ ,  $p \log_2 1/p$ , and  $p \log_2 1/p + (1-p) \log_2 1/(1-p)$* . Cambridge: Technical Report No. 227, Research Laboratory of Electronics, Massachusetts Institute of Technology, 1952. This table is quite useful in any computation of amounts of information.
- FANO, R. M. Information theory point of view in speech communication. *J. acous. Soc. Amer.*, 1950, **22**, 691-696. This paper presents a nonmathematical discussion of the theory and uses it to estimate the rate of transmission of information in speech communication.
- FANO, R. M. *The transmission of information*. Cambridge: Technical Reports No. 65 and No. 149, Research Laboratory of Electronics, Massachusetts Institute of Technology, 1949 and 1950. The basic theorems are developed in a different way than Shannon used, and more attention is given to the problem of finding the optimal coding scheme to reduce equivocation.
- FRICK, F. C., & MILLER, G. A. A statistical description of operant conditioning. *Amer. J. Psychol.*, 1951, **64**, 20-36. The sequential interpretation is used to analyze the behavior of rats in a Skinner box during preconditioning, conditioning, and extinction. Here  $T$  is used as a measure of stereotypy.
- GARNER, W. R., & HAKE, H. W. The amount of information in absolute judgments. *Psychol. Rev.*, 1951, **58**, 446-459. This paper contains an excellent description of the method of calculation of  $T$  in the transmission form of the theory, and points out the similarity between  $T$  and the contingency coefficient.
- HAKE, H. W., & GARNER, W. R. The effect of presenting various numbers of discrete steps on scale reading accuracy. *J. exp. Psychol.*, 1951, **42**, 358-366. Subjects who estimated the position of a pointer along a linear interval had the same channel capacity  $C$  for discriminating positions even though they were given different instructions and made different kinds of errors.



- HARTLEY, R. V. The transmission of information. *Bell Syst. tech. J.*, 1928, 17, 535-550. Mostly of historical interest today, this paper contains most of the basic ideas so elegantly developed by Shannon twenty years later.
- HICK, W. E. Information theory and intelligence tests. *Brit. J. Psychol.*, 1951, 4, 157-164. Answering test questions is broadly interpreted as a communication problem, and ways of designing tests to maximize the transmission are considered theoretically.
- HICK, W. E. On the rate of gain of information. *Quart. J. exper. Psychol.*, 1952, 4, 11-26. Information measurement is applied to a choice-reaction-time experiment. The amount of information in the choice divided by the reaction time gives a constant—about five bits per second.
- HICK, W. E. Why the human operator? *Trans. Soc. Instrument Technology*, 1952, 4, 67-77. The relative efficiency of men and machines is discussed in terms of their capacities to handle information. Several kinds of evidence are reviewed and an upper limit for men of about 15 bits per second (probably too low) is estimated.
- JACOBSON, H. Information and the human ear. *J. acous. Soc. Amer.*, 1951, 23, 464-471. The author calculates that 10,000 bits per second is the maximum capacity of the ear, but argues that the brain can utilize less than one per cent of this information.
- LAEMMEL, A. E. *General theory of communication*. Report R-208-49. Brooklyn: Microwave Research Institute, Polytechnic Institute of Brooklyn, 1949. Reviews the general theory and extends it for engineering applications.
- MACKEY, D. M. Quantal aspects of scientific information. *Phil. Mag.*, 1950, 41, 289-311. An attempt is made to distinguish "structural" from "quantitative" information and to relate the work of Fisher, Gabor, and Shannon.
- MARKS, M. R., & JACK, O. Verbal context and memory span for meaningful material. *Amer. J. Psychol.*, 1952, 65, 298-300. A repetition of the Miller-Selfridge experiment using the span of immediate memory failed to confirm the results of the previous study. Memory span measurements generally fail to show any constancy in the amount of information retained.
- MILLER, G. A. *Language and communication*. New York: McGraw-Hill, 1951. In this book an attempt is made to use information theory to integrate and interconnect a review of psycho-linguistics.
- MILLER, G. A. Language engineering. *J. acous. Soc. Amer.*, 1950, 22, 720-725. Suggestions are made for the use of information theory in the design of special languages for special uses, e.g. an international language for aviation.
- MILLER, G. A. Speech and Language. In S. S. Stevens (Ed), *Handbook of experimental psychology*. New York: Wiley, 1951. The first half of this chapter relates some of the standard studies of verbal behavior to the sequential form of information theory.
- MILLER, G. A., & FRICK, F. C. Statistical behavioristics and sequences of responses. *Psychol. Rev.*, 1949, 56, 311-324. The sequential form of the theory is developed in an elementary manner and used to define an index of behavioral stereotypy.
- MILLER, G. A., HEISE, G. A., & LICHTEN, W. The intelligibility of speech as a function of the context of the test materials. *J. exp. Psychol.*, 1951, 41, 329-335. The transmission form of the theory was used to show the effect of increasing the input information upon the per cent of spoken words correctly perceived.
- MILLER, G. A., & SELFIDGE, J. A. Verbal context and the recall of meaningful material. *Amer. J. Psychol.*, 1950, 63, 176-185. The sequential interpretation of the theory was used to construct learning materials with varying amounts of contextual constraint. Thus the passages differed in average amount of information per word. To a rough approximation, the amount of information recalled was constant for all passages.
- NEWMAN, E. B. Computational methods useful in analyzing series of binary data. *Amer. J. Psychol.*, 1951, 64, 252-262. In addition to a description of an interesting tabulating device for use with binary data, this paper contains a table of  $-p \log_2 p$  that is quite useful to computers.
- NEWMAN, E. B. The pattern of vowels and consonants in various languages. *Amer. J. Psychol.*, 1951, 64, 369-379. The measure of redundancy is used to compare the predictability of vowel-consonant sequences in eleven written languages.
- NEWMAN, E. B., & GERSTMAN, L. S. A new method for analyzing printed English. *J. exp. Psychol.*, 1952, 44, 114-125. A coefficient of constraint is defined and used to obtain results that can be compared to Shannon's estimates of the redundancy in printed English.
- PARKE, N. G., & SAMSON, E. W. *Distance and equivalence in sequence space*. Report E4080. Cambridge: Air Force Cambridge Research Laboratories, 1951. Develops the notion suggested by Shannon that the information from two sources  $x$  and  $y$  be called equivalent if  $H_x(y)$  and  $H_y(x)$  are zero and that the "distance" between any two nonequivalent sources be defined as  $H_x(y) + H_y(x)$ .
- RUESCH, J., & BATESON, G. *Communication, the social matrix of psychiatry*. New York: Norton, 1951. This book stresses the importance of communication in psychiatric problems, makes some use of information theory and suggests many more.
- SAMSON, E. W. *Fundamental natural concepts of information theory*. Report E5079. Cambridge: Air Force Cambridge Research Station, 1951. The intuitive nature of the concepts of expectation, surprise, and uncertainty is stressed.
- SENDERS, V. L., & SOWARDS, A. Analysis of response sequences in the setting of a psychophysical experiment. *Amer. J. Psychol.*, 1952, 65, 358-374. The sequential model is used to analyze response dependencies in a psychophysical experiment.



- SHANNON, C. E. Communication in the presence of noise. *Proc. Inst. Radio Engineers*, 1949, 37, 10-21. A geometrical representation is developed for the communication of continuous functions disturbed by noise interference.
- SHANNON, C. E. *A mathematical theory of communication*. *Bell Syst. tech. J.*, 1948, 27, 379-423, 623-656. These two articles comprise the first systematic presentation of the concepts of information measurement. Although the mathematics are difficult for most psychologists, this is still the basic reference in this field. Reprinted in 1949 with an article by Weaver by the University of Illinois Press.
- SHANNON, C. E. Prediction and entropy of printed English. *Bell Syst. tech. J.*, 1951, 30, 50-64. A clever device is developed for estimating upper and lower bounds for the redundancy of English and used to estimate the relative efficiency of English text at about 25 per cent.
- WEAVER, W. Recent contributions to the mathematical theory of communication. In Shannon, C. E., and Weaver, W., *The mathematical theory of communication*. Urbana: Univer. of Illinois Press, 1949. This nonmathematical exposition is an expansion of an article in *Scientific American*, July, 1949, and is intended as an introductory orientation that can be read before one tackles the more mathematical aspects of the theory. Weaver suggests ways to generalize the theory to the broader problems of social communication.
- WIENER, N. *Cybernetics*. New York: Wiley, 1948. One chapter of this pioneering volume expounds the author's discoveries in information theory. For most psychologists, this volume is more stimulating than intelligible.
- WIENER, N. *The human use of human beings*. Boston: Houghton Mifflin, 1950. In a less mathematical form, the social consequences of the ideas in *Cybernetics* are emphasized and explained in highly readable prose.
- WOODBURY, M. A. On the standard length of a test. *Psychometrika*, 1951, 16, 103-106. A parameter called "the standard length" is defined in such a way that a test of standard length gives one unit of information. This paper suggests one way of employing information theory in the analysis of mental tests.

*Manuscript received May 14, 1952*

# TRAINING FACILITIES AND FINANCIAL ASSISTANCE FOR GRADUATE STUDENTS IN PSYCHOLOGY: 1953-1954

OFFICE OF THE EXECUTIVE SECRETARY, AMERICAN PSYCHOLOGICAL ASSOCIATION

FOR the past eight years the *American Psychologist* has published annually an article for students who plan to do graduate work in psychology and for instructors who must advise these students. Some of the articles have been concerned primarily with training facilities; others have emphasized scholarships, fellowships, assistantships, and other forms of financial aid available. Sometimes the article has included both types of information. This year we have again prepared a combined article for 1953-1954.

The information was gathered by sending a questionnaire to all institutions listed in previous articles in the series. Questionnaires were also sent to all universities named in the American Council on Education's *American Universities and Colleges* (3) as offering graduate training. An innovation this year is the inclusion of several Canadian universities which have graduate training in psychology. All schools returning the questionnaire and stating that they gave work in psychology at the graduate level are included in the section on training facilities. In a few rare instances, schools indicated that although a limited amount of work at the graduate level was available, they preferred not to be listed in the article; these schools have not been included. Any school stating that it had no graduate work in psychology was, of course, omitted. Schools not submitting information for 1953-1954 are not included; no listing based on information submitted in previous years has been used. There are, thus, certain omissions resulting from the fact that a school did not send current information. Actually, surprisingly few schools did not return a questionnaire. The staff of the APA Central Office is grateful for the prompt replies and generally excellent cooperation received from the department chairmen.

## GRADUATE TRAINING FACILITIES

Table 1 summarizes the information about training facilities in psychology. Although the table

gives the essential data, it must, of necessity, present a greatly condensed version of the many ramifications and idiosyncrasies of individual departments. For example, some departments put most emphasis upon research, others on professional training. The administrative structure of the institution may influence the training program, and the size of the school and the department also has an important bearing on the kind of training the student will receive. Needless to say, the interests of the faculty members color the whole training program, especially at the graduate level where much of the work is done on a seminar or personal-supervision basis. The student should probably use the table only as a general guide and should obtain further information by consulting the university's catalog, talking with psychologists who are familiar with the department, or writing for details directly to the department in which he is interested. Very often departments have prepared statements, describing the goals of their training programs, their admission requirements, and the steps a student must take to obtain an advanced degree.

The name of the university or college is listed in the first column of Table 1. Although in most universities psychological training is given in the department of psychology, in some cases there are also specialized departments or committees which offer training in particular fields. These specialized departments are listed under the name of the university. Furthermore, the listings in the table do not necessarily include all types of training related to psychology, such as industrial relations, remedial reading, business administration, etc., which are often administered by other departments.

In the second column is the name of the administrative officer in the department or division. Practically always, this administrative officer is the chairman, or the acting chairman, of the department of psychology. Students who are seeking specific information about a department should

TABLE 1  
Fields of psychology in which graduate training is offered

Institution	Administrative Officer	No. of Degrees Granted, 1949-52		Experi- mental	Child & Devel.	Educa- tional	Soc. & Pers.	Clinical	Coun- seling	Tests & Meas.	Indus- trial	Applied Social	General preparation for PhD
		Doctoral	Master's										
Acadia U., Nova Scotia	P. L. Newbigging		5	M	M		M	D		M			M
Adelphi College	O. D. Anderson	1	8	DM			M	M		M			M
Alabama Polytechnic Inst. <sup>4</sup>	S. C. McIntyre		4	M	M			M	M	M			M
Alabama, U. of	Oliver L. Lacey		11	M	M			M					M
Alberta, U. of											M		M
Phil and Psych. Educational Psych. American U. <sup>4</sup>	Douglas E. Smith		6	M			M	M	M	M			M
	G. W. Dunlop		16	M		M	M	M	M	M			M
	C. K. Trueblood		6			M	M	M	M	M			M
Appalachian St. Teach. Coll.	Chapell Wilson		326				M						
Arkansas, U. of	M. E. Thompson		17	M									M
Ball State Teach. Coll.	L. D. Edmunson	1	101		D <sup>12</sup> M			M	D <sup>12</sup> M				M
Baylor U.	E. O. Wood		19	M	M	D <sup>12</sup>	M	M	M	M	M		M
Boston U.	W. J. Pinard	11	99	D <sup>8</sup>		D <sup>8</sup>	D <sup>8</sup>	D <sup>1, 8</sup>	M		D <sup>8</sup>	M	M <sup>8</sup>
Bowling Green State U.	J. E. Wenrick		27	M				M	M				M
Brigham Young U.	Mark K. Allen		1	M		M		M	M <sup>2</sup>	M	M		M
British Columbia, U. of	Barnett Savary		18	M		M <sup>2</sup>	M	DM	M			M <sup>2</sup>	M
Brooklyn College	Wayne Dennis		9		M								M
Brown U.	W. S. Hunter	6	14	DM				DM		DM			
Bryn Mawr College	Joe K. Adams	1	4	DM	DM	DM	DM	DM	DM	M	M	DM	M
Buffalo, U. of	Olive P. Lester	3	14	DM	M	DM <sup>2</sup>	DM	D <sup>1</sup> M	DM				M
Butler U.	Charles C. Josey		7					M					M
California, U. of													
Berkeley	Clarence W. Brown	39	45	DM	DM	DM <sup>2</sup>	DM	D <sup>1</sup> M		DM	DM	DM	M
Los Angeles	J. A. Gengerelli	35	80	DM	DM		DM	D <sup>1</sup> M	DM	DM	DM		
Carnegie Inst. of Tech.	B. von H. Gilmer	1	4	DM									
Catholic U. of America	John W. Stafford	17	60	DM	DM		DM	D <sup>1</sup> M	DM	DM	DM	DM	M
Chicago, U. of													
Dept. of Psych.	James G. Miller	61	19	D	D		D	D <sup>1</sup>	DM	D			
Com. on Hum. Devel.	R. J. Havighurst	49	54	DM	DM	DM	DM		DM	DM	DM		
Chico State College	J. C. Narciso, Jr.		6						M				M
Cincinnati, U. of	Arthur G. Bills	6	12	DM		D <sup>2</sup>			M	M	M		M
City Coll. of N. Y.	John Gray Peatman		8				M						
Claremont Coll.	F. T. Perkins	5	25	DM	DM	DM	DM	DM	DM	M		DM	M





TABLE 1—Continued

Institution	Administrative Officer	No. of Degrees Granted, 1949-52		Experi- mental	Child & Devel.	Educa- tional	Soc. & Pers.	Clinical	Coun- selling	Tests & Meas.	Indus- trial	Applied Social	General preparation for PhD
		Doctoral	Master's										
Hawaii, U. of	H. B. Weaver		8		M						M		M
Houston, U. of	L. T. Callicutt		43	M	M	DM	M	M	DM	M	DM		M
Howard U.	F. C. Sumner		20										M
Hunter Coll.	J. M. O'Gorman		10	M		M <sup>12</sup>			M	M			M
Idaho, U. of	Wm. H. Boyer		27	DM		M	DM		M	DM	DM		M
Illinois Inst. Technology	P. S. Shurrager		7										
Illinois State Norm. U.	C. A. De Young												
Illinois, U. of													
Dept. of Psych.	Lyle H. Lanier	21	113	DM				D <sup>1</sup>	D	DM	D		M
College of Educ.	W. B. Spalding	26	1,348		DM	DM		D <sup>1</sup> M	DM	DM		DM	
Indiana U.	J. R. Kantor	19	23	DM					M	M	M	M <sup>2</sup>	M
Iowa State Coll.	W. A. Owens, Jr.		18	M	M <sup>2</sup>				DM	DM	DM <sup>2</sup>		M
Iowa, State U. of													
Dept. of Psych.	Judson S. Brown	69	59	DM	DM <sup>2</sup>	DM <sup>2</sup>	DM	D <sup>1</sup> M	DM	DM			
Child Welfare Res.	B. R. McCandless	12	34	DM	DM	DM				DM	DM		
Johns Hopkins U.	C. T. Morgan	7	5	DM		DM	M	DM	M	DM			
Kansas City, U. of	Lorenz Misbach		14	M	M	M		M	M		M <sup>1</sup>	M	
Kansas State Coll., Manhattan	A. H. Brayfield		14			M							
Kansas State Teach. Coll., Emporia	J. H. Buchanan					M							
Kansas State Teach. Coll., Pittsburg	William A. Black					M							
Kansas, U. of	A. L. Baldwin	16	11	M	M	M	M	D <sup>1</sup>	M	M	D		M
Kent State U.	R. M. Drake		43	D	D		D	M		M	M		M
Kentucky, U. of	James S. Calvin	26	25	DM	M			D <sup>1</sup> M <sup>10</sup>	DM	M	M		M
Lehigh U.	Adelbert Ford		11	M				M	M	M	M		M
Long Beach State Coll. <sup>4</sup>	W. H. Moore		51	M		M	M	M	M	M	M		M
Long Island U.	J. I. Hartstein		4	M				M	M	M			M
Los Angeles Coll. <sup>4</sup>	H. Wilkening					M							
Louisiana State U.	Paul C. Young		20	M		M	M	DM	M	M	M		M
Louisville, U. of	Raymond A. Kemper		24	M	M	M	M	M	M	M		M	M
Loyola U., Chicago	Vincent V. Herr		25	DM		DM	DM	DM				M	M
MacMurray Coll.	H. M. Halverson	5	18					M	M			DM	
McGill U.	D. O. Hebb	13	38	DM	DM		DM	M	DM	DM	DM		
Maine, U. of	A. D. Glanville		8	M				M					M
Manitoba, U. of	B. M. Springbett		8	M			M						M
Marshall Coll.	K. K. Loemker		17										M
Maryland, U. of	T. G. Andrews	13	17	DM			DM		DM	DM	DM		M
Massachusetts, U. of	C. C. Neet		18	M	M		M	M	M	M	M		M
Miami, U., Oxford, Ohio	E. F. Patten		1	M	M								

TABLE 1—(Continued)

Institution	Administrative Officer	No. of Degrees Granted, 1949-52		Experi- mental	Child & Devel.	Educa- tional	Soc. & Pers.	Clinical	Coun- seling	Tests & Meas.	Indus- trial	Applied Social	General preparation for PhD
		Doctoral	Master's										
Miami, U. of	G. C. Fisher	7	51	M	DM		DM	M	D	DM	DM		M
Michigan State Coll.	H. H. Anderson	70	47	DM			D	D <sup>1</sup>		D	D		M
Michigan, U. of	D. G. Marquis		73	D			M	D <sup>1</sup>					M
Mills Coll.	Mary W. Bennett		10		M <sup>2</sup>	M <sup>2</sup>	DM	D <sup>1</sup>	DM	DM	DM		M
Minnesota, U. of	Paul E. Meehl	20	64	DM			DM	D <sup>1</sup>	M	M			M
Mississippi, U. of	John B. Wolfe		15	M	M		DM	DM	DM <sup>2</sup>	M			M
Missouri, U. of	Fred McKinney		23	DM	M	DM <sup>2</sup>	DM	M	M	M			M
Montana, U. of	E. A. Atkinson		4	M	M		DM	DM	DM	DM			M
Montréal, Université de	Noël Mailloux	2	29	M		DM	DM	D <sup>1</sup>		DM			M
Nebraska, U. of	D. W. Dysinger	3	16	DM						DM			M
Nevada, U. of	Ralph A. Irwin		2							M			M
New Brunswick, U. of <sup>4</sup>	F. T. Snodgrass					M	M	M	M				
New Hampshire, U. of	H. A. Carroll		9			M	M	M					
New Haven State Teach Coll.	Edwin L. Martin		134		M	M	M	M					M
New Mexico Coll. of A. & M	Claude C. Dove	4									M		M
New Mexico, Eastern U.	D. H. Reed	9			M	M	M	M	M	M			M
New Mexico Highlands U.	Anna V. Martin	19			M	M	M	M	M	M			M
New Mexico, U. of	G. M. Peterson	16		M		M	M	M	M	M			
New School for Social Res.	Mary Henle	6	39	D			D	D <sup>1</sup>	D		DM		
New York U.					M			DM	DM				M
Dept. of Psych.	Stuart W. Cook	33	44	DM				DM		M			
Dept. of Educ. Psych.	C. E. Skinner	114	526	DM	DM	DM		DM	DM	M			
North Carolina Coll., Durham	E. T. Kyle				M								
North Carolina State Coll.	D. J. Moffie		14								M		
North Carolina, U. of	Dorothy C. Adkins	2	13	DM			DM	D <sup>1</sup>		DM		DM	
North Dakota, U. of	H. F. Buegel	7	7	DM		M	DM	M	M	M			M
Northwestern U.	William A. Hunt	31	47	DM			DM	D <sup>1</sup>	DM	DM			M
Oberlin Coll.	L. E. Cole		6	M									
Occidental Coll.	G. Brighthouse		39	M	M			M	M	M	M		M
Ohio State U.	H. E. Burtt		61	DM	DM	DM	DM	DM	DM	DM	DM		M
Ohio Wesleyan U.	R. R. Greene		6										
Oklahoma A & M Coll.	S. L. Reed	7	19		M	M			DM		M		M
Oklahoma, U. of	M. O. Wilson	2	35	DM	D <sup>1</sup>	DM	DM	D	DM <sup>2</sup>	M	M		M
Omaha, U. of	W. H. Thompson		16			M		M	M		M		M
Oregon, U. of	H. R. Taylor		54	DM	DM	DM	DM	DM	DM	DM	DM		M
Ottawa, U. of	R. H. Shevenell	9	20			DM	DM	DM	DM	DM			M
Pacific U.	Anna Berliner		1	M		DM		M		DM			

TABLE 1—(Continued)

Institution	Administrative Officer	No. of Degrees Granted, 1949-52		Experi- mental	Child & Devel.	Educa- tional	Soc. & Pers.	Clinical	Coun- seling	Tests & Meas.	Indus- trial	Applied Social	General preparation for PhD
		Doctoral	Master's										
Pennsylvania State Coll.	C. R. Carpenter	30	90	DM	DM <sup>3</sup>	DM	DM	D <sup>1</sup> M	DM	DM	DM	DM	M
Pennsylvania, U. of	R. A. Brotemarkle	27	78	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	D <sup>1</sup> , <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	M <sup>2</sup>
Pittsburgh, U. of	Robert A. Patton	51	68	DM	M	DM	DM	D <sup>1</sup> M	DM	DM	DM		
Portland, U. of	John B. Delaunay	2	9	M		M	DM	DM	DM	M	M		
Princeton U.	Carroll C. Pratt	16	17	DM									
Purdue U.	E. J. Asher	54	102	DM	M	DM	M	D <sup>1</sup> M	DM	DM	DM	DM	
Queen's University, Kingston, Can.	J. M. Blackburn	8		M			M	M					
Radcliffe Coll. <sup>14</sup>	Edwin B. Newman	1											
Richmond Professional Inst. <sup>4</sup>	V. J. Bielauskas		6		M		M	M	M	M	M		M
Richmond, U. of	M. E. Carver	12	5					D <sup>1</sup> , <sup>2</sup>		D <sup>2</sup>	D <sup>2</sup>		M
Rochester, U. of	G. R. Wendt		5	D <sup>2</sup>	M		D <sup>2</sup>	M		M	M		M
Roosevelt Coll. <sup>4</sup>	G. W. Hartmann		2	M	M	M	M	M	M	M	D		M
Rutgers U.	Morgan Upton		3	M			M		M	M			M
Sacramento State Coll.	James D. Lucas		5										M
St. Louis U.	W. L. Wilkins		7	M	M		M	M	M	M			M
San Diego State Coll.	H. B. Carlson		3	M	M	M	M	M	M	M			M
San Francisco State Coll.	Louis S. Levine		7	M	M	M	M	M	M	M	M		M
San Jose State Coll.	C. W. Telford		19	M	M	M	M	M	M	M			
Sarah Lawrence Coll.	B. Steinzor												
Saskatchewan, U. of	G. A. McMurray		2	M	M	M	M	M					M
Smith Coll.	H. E. Israel		3	M	M	M	M	M		M			M
South Carolina, U. of	M. K. Walsh		16										M
South Dakota, U. of	Henry V. Cobb		11	M	M	M	M	M					M
Southern California, U. of	Constance Lovell		38	DM				D <sup>1</sup>	M	DM	DM		M
Southern Methodist U.	Alvin J. North		48				M	M <sup>10</sup>		M	M		M
Southwestern U.	Oscar A. Ullrich			M	M								M
Springfield Coll.	Seth Arsenian		54						M				M
Stanford U.	Robert R. Sears	33	42	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	D <sup>1</sup> , <sup>2</sup>	D <sup>2</sup> , <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>	M
Swarthmore Coll.	Hans Wallach		5	M			M						
Syracuse U.	C. Robert Pace	22	— <sup>6</sup>	M	DM	DM	DM	DM	DM	DM	DM	DM	
Temple U.	C. H. Smeltzer	9	195	DM	DM	DM		DM	DM	DM	DM	DM	
Tennessee, U. of	E. E. Cureton	9	24	DM				D <sup>1</sup> M	M	DM	DM	DM	M
Texas Christian U.	C. W. LaGrone		16					M	M	DM	DM	DM	M
Texas Coll. of Arts and Ind.	H. T. Croley		1						M				M
Texas State Coll., North	Merl E. Bonney		18			M	M	M	M				M
Texas Tech. Coll.	L. C. Hutchins	3	3	DM	DM	DM		M	DM		M		M

TABLE 1—(Continued)

Institution	Administrative Officer	No. of Degrees Granted, 1949-52		Experimental	Child & Devel.	Educa- tional	Soc. & Pers.	Clinical	Coun- selling	Tests & Meas.	Indus- trial	Applied Social	General preparation for PhD
		Doctoral	Master's										
Texas, U. of	K. M. Dallenbach	20	66	DM	DM	DM	DM	D <sup>1</sup>		DM	M		M
Dept. of Psych.	O. B. Douglas	10	179		DM	DM			DM	DM			
Dept. of Educ. Psych.	P. W. Stansbury		15		M	M	M		M	M	M		M
Toledo, U. of	A. H. Souerwine		7										M
Trinity Coll., Hartford, Conn.	Felix Ullrich		7										M
Trinity U., Hartford, Conn.	Leonard C. Mead		3	M									M
Tufts Coll.	Arthur L. Irion	9	16	DM				M <sup>10</sup>					M
Tulane U.	L. S. McLeod		35	M				M			M		M
Tulsa, U. of	Arden Frandsen		21		M			M					M
Utah State Agric. Coll.	S. L. Crawley	4	32	DM	M	— <sup>2</sup>	M	DM	— <sup>2</sup>	DM	M	DM	M
Utah, U. of	Leland E. Thune	3	12	DM			M	DM	M	M		M	M
Vanderbilt U.	D. W. Chapman		1				M	M					M
Vassar Coll.	John T. Metcalf			M									M
Vermont, U. of	Walter N. Ridley		8			M			M				M
Virginia State Coll.	Frank A. Geldard	6	14	DM									M
Virginia, U. of	James H. Elder	3	40	D	M		D	M	M	D	M		
Washington, State Coll. of	Marion E. Bunch	26	11	DM	D	M	D	D <sup>1</sup>	M	DM	DM		M
Washington U., St. Louis	R. B. Loucks	9	38	DM	DM	DM	DM	DM		DM	M		M
Washington, U. of, Seattle	W. C. F. Krueger		9					M					M
Wayne U.	M. J. Zigler		5										M
Wellesley Coll.	Robert H. Knapp		6										M
Wesleyan U.	R. B. Liddy		20		M								M
Western Ontario, U. of	E. L. Stromberg		40	DM			DM	M	DM	M	DM		M
Western Reserve U.	Quin F. Curtis	32	8	M	M		M	D <sup>1</sup>	M	M	M		M
West Virginia U.	N. H. Pronko		7	M				M	M				M
Wichita, U. of	David A. Grant	11	33	DM	M <sup>2</sup>		DM	M		DM	DM		M
Wisconsin, U. of	H. B. McFadden		12	M	M		M	D <sup>1</sup>		M			M
Wyoming, U. of	Claude E. Buxton	20		D	D		D	D		D	D	D	M
Yale U.	Julius B. Mailer	4	17	DM				DM					M
Yeshiva U.													

<sup>1</sup> Approved by APA for doctoral training in clinical psychology.  
<sup>2</sup> Degree awarded by another department or school, e.g., education, guidance, business, commerce, etc., or work taken jointly with another department.  
<sup>3</sup> No terminal master's degree, but in some cases may be obtained in PhD program.

<sup>4</sup> Recently organized department.

<sup>5</sup> No data about fields.

<sup>6</sup> No data about degrees.

<sup>7</sup> MA is general preparation for PhD.

<sup>8</sup> Master's offered but without specialization.

<sup>9</sup> Doctor's not awarded in specific fields, but thesis may be in various areas.

<sup>10</sup> Preclinical preparation.

<sup>11</sup> Data for PhD's in clinical only.

<sup>12</sup> EdD in conjunction with Indiana U.

<sup>13</sup> Graduate training in educational psychology.

<sup>14</sup> See listings under Harvard University.

<sup>15</sup> Program offered in conjunction with Vanderbilt University.



address their letters to this person. Use of the title "Dr." is ordinarily preferred.

The first letter of inquiry should be sent well in advance of the expected date of entrance. In addition to requesting information, this letter should also supply the department with information about the student, including such facts as his undergraduate training, any previous graduate work, experience, vocational plans, and financial status. Upon receipt of this letter, the department or graduate school will usually send the student a formal application blank, as well as answering any specific questions.

Although most graduate departments are not so overcrowded as they were during the years immediately following the war, selection of students continues to be rigorous. Because advanced graduate training is tutorial and closely supervised, departments usually try to keep their enrollment to a size that can be effectively handled.

Entrance requirements for admission to graduate work in psychology vary widely. However, it is almost invariably true that a superior undergraduate record is required. Some departments require or deem advisable certain types of undergraduate training in psychology and other fields; others require only the successful completion of the baccalaureate degree. Some departments like to have a personal interview with the applicant. Detailed information will usually be sent to a prospective applicant at the time he is sent an application blank by the institution. Such information can also usually be found in the university's graduate catalog.

The third and fourth columns of Table 1 give the numbers of graduate degrees, as reported by the institutions, for the past three academic years. For the student probably the most meaningful implication in these figures is that they reveal, in a very general way, the approximate numbers of graduate students in the department. The figures are, of course, for the past three years when many departments were swollen beyond their normal size by the influx of veterans working under the G.I. Bill. In some cases, moreover, a small number of degrees granted in these years may mean merely that the department has only recently been organized and there has not yet been time for many students to complete their degree work.

The next ten columns show the fields of specialization and the degrees awarded. The questionnaire requested the department chairman to check

only those fields in which (a) the department had awarded a degree within the past five years to a student specializing in this area and/or (b) the department had at least two faculty members qualified to supervise students specializing in this area.

To abbreviate in a table all of the many possible psychological specialties sometimes does an injustice to the department. The fields listed are, however, the most common and well-known designations. "Experimental," as a field, is sometimes referred to as "general experimental psychology." Ordinarily, though by no means always, it also covers the fields of comparative and physiological psychology. Work in child and developmental psychology and in educational psychology is often offered in conjunction with another department. The fields of social psychology and personality have been grouped under one heading because in most institutions they are offered as a combined program. Occasionally, however, social psychology may be a separate specialty. Clinical, counseling, and industrial psychology are generally professional fields. Tests and measurements refers more to training in the technical aspects of psychological tests than to clinical testing, and includes statistics and psychometrics. "Applied social" is generally the more professional application of social psychology, such as market research, polling, and certain techniques in group dynamics, etc.

In these columns the letter "M" stands for master's degree (MA, MS, MEd) and the letter "D" for doctoral degree (PhD, EdD). We have not attempted to specify which particular degree is awarded, but only to indicate the level of training. Some universities limit their graduate training to students who aspire to the doctoral degree. This is especially true in the area of clinical psychology. Students who intend to enter such programs should be prepared to spend three to four, or sometimes more, years in graduate school and should make their financial plans accordingly. In contrast, other schools concentrate on work to the master's level, either as a terminal degree or as general preparation for the doctorate.

The student examining this table should be careful not to overlook the footnotes which give additional facts, and sometimes exceptions, to the general information in the table. A special word of caution should be attached to footnote 1, which states "Approved by APA for doctoral training in clinical psychology." The institutions so design-

nated are those which, upon their own request, have been evaluated by the Education and Training Board of the American Psychological Association and approved for doctoral training in clinical psychology. This approval has no implication whatsoever for the training program in any of the other fields.

Two other points deserve emphasis. First, the advanced degree itself is usually not specifically granted in one of these fields. That is, the degree awarded will be a "PhD in Psychology" not, for example, a "PhD in Tests and Measurement." However, after completion of basic work in psychology most students will go on to these more specialized fields and the dissertation or thesis will be on a specialized topic. Second, these fields do not necessarily refer to job specialties. To take a specific case, "School Psychologist" is not mentioned because it very seldom happens that an institution will offer training designed for this particular purpose. More often, the student who plans to do psychological work in the schools would take courses in child and developmental psychology, counseling, tests and measurement, etc., and write a thesis in the particular area in which he is interested. The same applies to various other jobs in psychology.

#### STIPENDS

The following pages summarize the material submitted concerning financial assistance. Some institutions, although giving graduate work in psychology, reported that no stipends would be available during 1953-1954. These institutions are not included in the section on stipends, but they are on the list in Table 1.

The order of each entry under stipends, the abbreviations used, together with some brief explanatory notes, are as follows:

1. *Name and address of institution:* The name and address of the institution apply throughout the description, and should be added to the names of officials and their departments when writing. If more than one department at a university is listed, the name and address apply to all such departments.

2. *Application for admission:* The student must apply for admission to graduate school as well as applying for stipends. Thus, it is sometimes necessary to write to two persons, one to apply for admission and another to apply for a stipend. Larger

universities sometimes request students to apply to the dean of colleges or heads of departments. Smaller universities typically request that applications be made to the Graduate School or Admissions Office.

3. *Graduate Record Examination (GRE) and Miller Analogies Test (MAT):* Because many departments require these two tests as part of their application procedures, information about them is given here. If these tests are required before admission, the department usually has some means of administering them in different cities. Some departments require other tests; information about them will usually be sent to the student when he applies.

4. *Tuition:* Tuition figures are usually for the academic year. In some cases, tuition is given for the quarter or semester, or according to semester or course hours.

The words *resident* and *nonresident* are used by state universities which charge out-of-state residents a larger sum than students from the state itself. The abbreviation *nr* refers to nonresident or out-of-state tuition.

5. *Number of scholarships and fellowships available:* The number listed is usually an approximate one. In most universities scholarships and fellowships are awarded on a merit basis without regard to field of interest, and the applicants in one department are in competition with the applicants in all other departments of the university. For departments which specifically stated that awards were made on a university-wide basis, the term *university scholarships* (or *fellowships*) has been used. Scholarships and fellowships usually do not require any work, and the recipient is expected to enroll as a full-time graduate student.

6. *Number of assistantships available:* Assistantships may be available for either teaching or research or for a combination of both. The terminology here varies with the university. For example, the terms *graduate assistant*, *laboratory assistant*, *teaching assistant*, *clinical assistant*, and *research assistant* are all used. We have not attempted in these entries to go into complete detail regarding the duties required in the various types of assistantships; the student may obtain this information from the department.

Under *teaching assistantship* the entry does not differentiate between a teaching assistantship in which a graduate student has charge of a class and

a teaching assistantship in which the student assists a more advanced teacher by grading papers, acting as laboratory assistant, etc.

Research assistantships are ordinarily granted to students for work on research projects being conducted by members of a department. In some cases various skills, in statistical or laboratory methods, etc., are a prerequisite for these positions, and hence first-year graduate students may not be eligible.

7. *Hours of work*: Hours of work required are usually expressed in hours per week, though sometimes in teaching load or teaching hours. The number of hours indicated should, in many cases, be considered an approximation, especially in the case of research assistantships where the student is ordinarily expected to become part of a research team and also to consider his research work as part of his graduate training, rather than as a job to which he will devote only a limited number of hours.

8. *Stipends*: Stipends are usually expressed in terms of total stipend for an academic year of nine months. If expressed in any other terms, the unit, such as per month, is named. Stipends for assistantships are usually dependent upon difficulty of the work and training and experience required for it. The abbreviation *ex* means that the stipend carries with it exemption from tuition or that the stipend covers the cost of tuition. Thus, an entry *stipend, ex* means that the tuition charges are waived or that the student receives an award equal to the cost of his tuition charges. An entry *stipend, \$500 ex* means that the student receives \$500 plus exemption from tuition. A frequent advantage of scholarships and assistantships is the exemption from tuition, often a sum larger than the award itself.

9. *New students*: New students are not eligible for the award unless the statement is specifically made that new students are eligible. The statement then applies only to the positions immediately preceding it.

10. *To whom to apply*: Scholarships and fellowships are usually applied for by writing to a university official, since ordinarily these awards are made for the whole institution, and not for just a specific department. Applications for scholarships and fellowships must ordinarily be submitted in time to meet a fairly rigid deadline. Assistantships are usually applied for by writing to the head of a department. In the statements, the person to whom

to apply is named following the description of the award or awards for which he receives applications.

11. *VA program*: The Veterans Administration (VA) program provides for training, leading to the PhD degree, of qualified students in clinical psychology. Students enrolled in this program must satisfy the same requirements as other graduate students; they differ from them only with regard to their part-time employment by the VA in hospitals and clinics near the universities in which they are studying. Applications are made to the chairman of the department at any time; appointments are most likely to begin in the fall. Detailed information about the clinical psychology program may be secured by writing the Chief, Clinical Psychology Section, Neuropsychiatry Division, Department of Medicine and Surgery, Veterans Administration, Washington 25, D. C.

The term *VA program* refers only to the program in clinical psychology. The Veterans Administration has recently begun a somewhat similar program in counseling psychology, but at the time the material for this article was assembled insufficient information about the counseling psychologist program was available. Information about this new program may be obtained by writing to the Chief, Vocational Counseling, Professional Services, Department of Medicine and Surgery, Veterans Administration, Washington 25, D. C.

12. *USPHS stipends*: The United States Public Health Service (USPHS) program provides some universities with a limited number of stipends for selected graduate students in clinical psychology. Stipends ordinarily range from \$1,200 to \$2,400 depending upon the level of training. Universities in which these stipends were available during 1952-1953 are indicated. Applications should be made to the chairman of the department of psychology at the desired university.

13. *Other positions available*: Many departments also have other positions or means of financial assistance for graduate students. If such information was submitted, it is listed in the entry.

In addition, many departments have other positions available than those listed here. Departments are often requested to recommend students for teaching evening classes or courses in nearby smaller colleges. These positions are not usually available on the basis of paper record or application, and hence new students are ordinarily not considered for them. However, they are part of the



possibilities for part-time employment while a graduate student.

The APA Central Office, through its placement office, has frequent requests from prospective graduate students for part-time employment while pursuing graduate studies. Few such positions are listed with the APA office. The student who wishes part-time work should write directly to the university in which he is interested.

---

**Acadia University, Wolfville, Nova Scotia, Canada.** Apply to Registrar before September 1. Tuition: \$180 a year. One or two teaching assistantships; 5 hours' work; stipend, \$100; new students usually not eligible. Apply by September 1 to Acting Head, Dept. of Psych.

**Adelphi College, Garden City, N. Y.** Apply for admission to Miss Mary C. McGrillies, Division of Graduate Studies, before April 15. Tuition: \$20 per credit. GRE required. Two fellowships; 15 hours' work; stipend, \$1,000. Six teaching assistantships; 5-12 hours' work; stipend, \$600-1,200. One general graduate assistantship available to new students. Few research assistantships occasionally available. Apply by April 15 to Dr. O. D. Anderson, Chairman, Dept. of Psych.

**Alabama Polytechnic Institute, Auburn, Ala.** Apply for admission to Dean, Graduate School, one quarter before anticipated registration. Tuition: \$105. GRE required on doctoral level only. One research assistantship; 15 hours' work; stipend, \$600; new students eligible. One assistantship; 17 hours' work; stipend, \$600; new students eligible. Apply by May 1 to Dr. S. C. McIntyre, Dept. of Psych.

**Alabama, University of, University, Alabama.** Apply for admission to Dr. A. B. Moore, Dean, Graduate School. Tuition: resident, administration fee of \$135; nr, administration fee of \$135 plus \$250 a year. One or two scholarships; no work; stipend, \$500 ex (tuition only, not administration fee); new students eligible. Apply by March 1 to Dr. A. B. Moore, Dean, Graduate School. Three teaching assistantships; 15 hours' work; stipend, \$833.33 ex (tuition only, not administration fee); new students eligible. Apply to Dr. O. L. Lacey, Chairman, Dept. of Psych.

**Alberta, University of, Edmonton, Alberta, Canada.** Apply for admission to Dr. O. J. Walker, Director, School of Graduate Studies, before August 15. Tuition: \$112.50. One scholarship in mental hygiene or child or educational psychology; no work; stipend, \$300. Three fellowships (open to all graduate students); no work; stipend, \$900; new students eligible for two fellowships, if Canadian. Apply by April 15 to the Registrar. Variable number of research assistantships, depending on available research grants; up to 20 hours' work; stipend, up to \$900; new students eligible.

The above information is based on a combined report from the department of philosophy and psychology and the division of educational psychology. Students are advised to write first, before making formal application, to either Dr. Douglas E. Smith, Head, Dept. of Phil. and Psych., or Dr. G. M. Dunlop, Head, Div. of Educ. Psych.

**American University, School of Social Sciences and Public Affairs, Washington, D. C.** Apply for admission to Dean Pitman B. Potter, Graduate Division. Tuition: \$13 per semester hour. Four teaching fellowships; 6 hours' work; stipend, \$1,200 and ex two courses per semester; new students eligible if qualified. Two fellowships for advanced graduate students who are Canadian citizens; no work; stipend, \$1,800; new students eligible. Practicums in test construction and occupational research in Dept. of Labor also available. Apply by April 15 to Graduate Dean, School of Social Sciences and Public Affairs.

**Appalachian State Teachers College, Boone, N. C.** Apply for admission to Mr. Chapell Wilson, Director, Graduate Study, at least 30 days before registration for quarter of proposed entrance. Tuition: \$112.50 for three quarters. MAT required. Ten teaching assistantships; 12-24 hours' work; stipend, \$300-900; new students eligible. Approximately seven positions as dormitory counselors also available. Apply to Mr. Chapell Wilson, Director Graduate Study.

**Arkansas, University of, Fayetteville, Ark.** Apply for admission to the Dean of the Graduate School or Chairman of the Dept. of Psych. before April 15. Tuition: resident, \$130; nr, \$330. Six to ten research assistantships; 15-20 hours' work; stipend, \$900-1,200 ex nr fee; new students eligible. Four teaching assistantships; 12 hours' work;

stipend, \$600 ex nr fee; new students eligible. Apply by April 15 to Dr. Merrell E. Thompson, Chairman, Dept. of Psych.

**Ball State Teachers College**, Muncie, Ind. Apply for admission to Dr. Robert Kloenker, Director, Graduate Studies, before September 1. Tuition: resident, \$96; nr, \$132. Four teaching and counseling assistantships; 20 hours' work; stipend, \$1,200-1,500. Apply by September 1 to Dr. L. D. Edmundson, Chairman, Dept. of Psych.

**Baylor University**, Waco, Texas. Apply for admission to Dr. W. T. Gooch, Dean, Graduate School, two quarters before enrollment. Tuition: \$382.50. MAT required. Eight scholarships; 12-15 hours' work; stipend, \$600-900; new students eligible after first quarter. Other part-time positions available in University's counseling program. Apply two quarters before enrollment to Chairman, Dept. of Psych.

**Boston University**, Boston, Mass. Apply for admission to Dean Chester M. Alter, Graduate School, before April 1. Tuition: \$550. GRE and MAT requested. One fellowship; 8 hours' work; stipend, \$1,000; new students eligible. Eleven teaching and general assistantships; 15 hours' work; stipend, \$550; new students eligible. Positions available with contract research projects. Six assistant instructorships; 3-6 semester hours' work; stipend, \$80 per semester course hour. VA program. Apply by April 1 to Dr. W. J. Pinard, Chairman, Dept. of Psych.

**Bowling Green State University**, Bowling Green, Ohio. Apply for admission to Dean, Graduate School, or Chairman, Dept. of Psych. Tuition: resident, \$149; nr, \$217. Five graduate assistantships; 15-18 hours' work; stipend, \$900 ex nr fees; new students eligible. Apply by March 1 to Dr. J. E. Wenrick, Chairman, Dept. of Psych.

**Brigham Young University**, Provo, Utah. Apply for admission to Dean, Graduate Division, before August 1. Tuition: \$135 a year. Two teaching assistantships; 10 hours' work; stipend, \$350; new students eligible. Apply by July 1 to Head, Dept. of Psych.

**British Columbia, University of**, Vancouver, B. C., Canada. Apply for admission to the Registrar before September 1. Tuition: \$238. Six to

8 research assistantships; 5 hours' work; stipend, \$200-400; new students eligible. Apply by October 1 to Chairman, Dept. of Psych.

**Brooklyn College**, Brooklyn 10, N. Y. Apply for admission to Director, Graduate Division. Tuition: \$10 per semester credit. GRE required. One fellowship; 20 hours' work; stipend, \$1,500; new students eligible. Number of research assistantships and teaching assistantships varies; hours of work vary; stipend varies; new students eligible. Other part-time professional positions available. Apply by March 15 to Chairman, Dept. of Psych.

**Brown University**, Providence 12, R. I. Apply for admission to Dean, Graduate School, before March 1. Tuition: \$520. GRE required. Several scholarships; no work; stipend, ex; new students eligible. One fellowship; no work; stipend, \$1,000 ex; new students eligible. Three to four research assistantships; 10 hours' work; stipend, \$1,000 ex; new students eligible. Nine to ten teaching assistantships; 10 hours' work; stipend, \$1,000 ex; new students eligible. Summer research positions also available. Apply in March to Graduate School.

**Bryn Mawr College**, Bryn Mawr, Pa. Apply for admission to Dean, Graduate School, before March 1. Tuition: \$500 per year. Two scholarships; no work; stipend, \$800; new students eligible. One fellowship; 1½ hours' work; stipend, \$1,500. Two teaching assistantships; 10 hours' work; stipend, \$1,150 ex. Apply by March 1 to Dean, Graduate School.

**Buffalo, University of**, Buffalo 14, N. Y. Apply for admission to Dean, Graduate School of Arts and Sciences, before March 1. Tuition: \$550. GRE and MAT required. Three research assistantships; 20 hours' work; stipend, \$1,000 ex. Ten assistantships; 10-15 hours' work; stipend, \$500-800 ex; new students eligible. Internships available for third and fourth year PhD students in clinical psychology. VA program. Apply by March 15 to Dr. Olive P. Lester, Acting Chairman, Dept. of Psych.

**California, University of**, Berkeley 4, Calif. Apply for admission to Graduate Division and Dept. of Psych., before February 1. Tuition: resident, \$37 per semester; nr, \$150 per semester. MAT required. Several university scholarships and fellowships available. Four research assistant-

ships; 20 hours' work; stipend, \$1,644 (11 months) ex for students on basis of grades; new students eligible. Twenty-six teaching assistantships; 20 hours' work; stipend, \$1,320 (10 months) ex for students on basis of grades. Four nursery school assistantships and approximately seven research assistantships are available in the Institute of Child Welfare and the Institute for Personality Assessment and Research. Additional part-time positions available on contract research projects. VA program. USPHS stipends. Apply by February 1 to Dept. of Psych.

**California, University of, Los Angeles 24, Calif.** Apply for admission to the Graduate Division or Chairman, Dept. of Psych., before March 1. Tuition: resident, none; nr, \$300. MAT required. One research assistantship; hours' work indefinite; stipend, \$1,000. Nine teaching assistantships; 20 hours' work; stipend, \$1,320 (ex if scholastic record sufficiently good); new students eligible for two of the nine. VA program. USPHS stipends. Apply by March 1 to Chairman, Dept. of Psych.

**Carnegie Institute of Technology, Pittsburgh 13, Pa.** Apply for admission to Dean, Division of Humanistic and Social Studies, before March 1. Tuition: \$680. Five scholarships; no work; stipend, ex; new students eligible. Five research assistantships; 9 hours' work; stipend, \$750 ex; new students eligible. One teaching assistantship; 6 hours' work; stipend, \$1,000 ex. Industrial internships also available. Apply by March 1 to Dean, Division of Humanistic and Social Studies.

**Catholic University of America, Washington 17, D. C.** Apply for admission to Dean, Graduate School of Arts and Sciences, before May 1. Tuition: \$600. One scholarship; no work; stipend, \$900; new students eligible. Several university fellowships. Apply by March 1 to Secretary General. Three teaching assistantships; 20 hours' work; stipend, \$1,500. Two internships in clinical psychology, two in remedial reading, and two in counseling also available. VA program. Apply by June 1 to Chairman, Dept. of Psych. and Psychiatry.

**Chicago, University of, Chicago 37, Ill.** Apply for admission to Director of Admissions four months before expected date of entrance. Tuition: \$720.

**Department of Psychology:** GRE desirable if available; MAT ordinarily required. Eight to 10 scholarships; no work; stipend, ex; new students eligible. Four to 6 fellowships; no work; stipend, \$500-1,000; new students eligible. Apply to Committee on Scholarships and Fellowships before February 15. Fifteen to 20 research assistantships; 15-20 hours' work; stipend, \$250-350 per quarter; new students eligible. Apply by February 15 to Executive Secretary. Six to 8 teaching assistantships; 15-20 hours' work; stipend, \$250 per quarter. VA program. USPHS stipends. Apply to Executive Secretary, Psych. Dept.

**Committee on Human Development:** Twelve scholarships; no work; stipend, \$300-740; new students eligible. Two fellowships; no work; stipend, \$500-1,000; new students eligible. Twelve research assistantships; number of hours' work varies; stipend, \$500-3,000. Apply by February 1 to Committee on Fellowships and Scholarships.

**Chico State College, Chico, Calif.** Apply for admission to the Registrar before September 1. Tuition: \$28. One resident counselor in men's dormitory; stipend, \$400; new students eligible. Some grader work available. Apply by March 15 to Coordinator for Psych.

**Cincinnati, University of, Cincinnati 21, Ohio.** Apply for admission to Dr. Arthur G. Bills, Chairman, Dept. of Psych., before June 1. Tuition: resident, \$300; nr, \$400. Either GRE or MAT required. Few scholarships; no work; stipend, ex; new students seldom eligible. Apply to Dean, Graduate School. One laboratory assistantship available but applications not solicited from new students.

**City College of the City of New York, New York 31, N. Y.** Apply for admission to Professor Joseph E. Barmack, Secretary, Graduate Committee before April 1. Tuition: approximately \$400. Six fellowships; 25 hours' work; stipend, \$1,250; new students eligible. Apply by April 1 to Dr. John Gray Peatman, Chairman, Dept. of Psych.

**Claremont College, Claremont, Calif.** Apply for admission to Office of Admissions before March 1. Tuition: \$225 per semester. MAT required. Five scholarships; no work; stipend, \$750; new students eligible. Four fellowships; 5-15 hours' work; stipend, \$300-800. Apply by March 1 to Dr. Evelyn Troup. Two research assistantships;



10 hours' work; stipend, \$400. Apply by April 1 to Dr. F. Theodore Perkins, Chairman, Dept. of Psych.

**Clark University, Worcester, Mass.** Apply for admission to Psych. Dept. before February 15. Tuition: \$500. GRE required. Thirteen scholarships or fellowships; no work; stipend, \$500-900; new students eligible. Eight research assistantships; 15-20 hours' work; stipend, \$600-\$1,500 usually ex; new students eligible. Eight teaching assistantships; 15-20 hours' work; stipend, \$600-\$1,500 usually ex. VA program. USPHS stipends. Apply by February 15 to Dept. of Psych.

**Colgate University, Hamilton, N. Y.** Apply for admission to Dr. Strang Lawson, Chairman, Graduate Studies, before March 1. Tuition: \$700. GRE required. Eight preceptorships; half-time work; stipend, \$1,400; new students not eligible. Apply by March 1 to Chairman of Graduate Studies.

**Colorado College, Colorado Springs, Colo.** Apply for admission to Dean H. E. Mathias, Director of Admission. Tuition: \$525 a year. GRE required before admission to degree candidacy. One to two teaching assistantships; 12 hours' work; stipend, ex; new students eligible. Apply at time of enrollment, preferably earlier, to Dean H. E. Mathias, Director of Admission.

**Colorado, University of, Boulder, Colo.** Apply for admission to Chairman, Dept. of Psych. before April 1. Tuition: resident, \$156; nr, \$422. Number of scholarships varies; no work; stipend, ex; new students eligible. Number of fellowships varies; no work; stipend, \$600-900 ex. Apply by April 1 to Dean, Graduate School. Number of research assistantships varies; number of hours of work varies; stipend varies; new students eligible. Five teaching assistantships; 15 hours' work; stipend, \$675-810 ex nr tuition; new students eligible. VA program. USPHS stipends. Apply by March 1 to Chairman, Dept. of Psych.

**Columbia University, New York 27, N. Y.** Apply for admission to Office of University Admissions before June 1 or November 1. Tuition: \$750.

*Department of Psychology:* GRE required. Two to three scholarships; no work; stipend, approximately \$500; new students eligible. One or two fellowships; no work; stipend, \$1,500; new students

eligible. Apply by February 1 to Admissions Office. Four research assistantships; 20 hours' work; stipend, \$500-600. Nine teaching assistantships; 20 hours' work; stipend, \$1,200 ex; new students rarely eligible. Other positions available. Apply to Dept. of Psych.

*Teachers College, Department of Guidance:* Apply before March 15 for clinical psychology, before May 15 for other areas, to Admissions Office, Teachers College. Tuition: \$800 a year. GRE required in clinical and counseling psychology. Eighteen scholarships; no work; stipend, \$159-300; new students eligible. Fourteen fellowships; no work; stipend, \$500-2,000; new students eligible. Apply before January 1 to Committee on Scholarships and Fellowship. Approximately fifteen teaching assistantships; 5-10 hours' work; \$100-500 per semester; applications not solicited. VA program. USPHS stipends. Other positions available.

*Teachers College, Division of Psychological Foundations.* Apply for admission to Admissions Office, Teachers College before April 15 for summer session, before August 1 for winter session, and before January 1 for spring session. Tuition: \$25 per point each semester plus university fee of \$5 to \$20 depending on points taken. GRE occasionally required. Several university scholarships and fellowships; no work; stipend, \$150-2,500; new students eligible. Unspecified number of research assistantships; hours of work vary; stipend depends upon work done; if more than \$1,000, ex for 8 points a semester at \$25 per point; new students occasionally eligible. Apply to Committee on Scholarships and Fellowships. Other part-time positions available.

**Connecticut College, New London, Conn.** Apply for admission to Prof. M. H. Applezweig, Dept. of Psych. before April 15. Tuition: \$830 a year. Two scholarships; 3 hours' work; stipend, ex; new students eligible. Two research assistantships; 20 hours' work; stipend, \$1,200-1,600 ex; new students eligible. Two teaching assistantships; 15-20 hours' work; stipend, \$1,200 ex; new students eligible. Apply before April 15 to Prof. M. H. Applezweig, Chairman, Dept. of Psych.

**Connecticut, University of, Storrs, Conn.** Apply for admission to Dean, Graduate School, before April 1. Tuition: \$150. MAT required.

One fellowship; 18 hours' work; stipend, \$1,500. Apply by April 1 to Head, Dept. of Psych. Six teaching assistantships; 18 hours' work; stipend, \$1,305; new students eligible. A limited number of other part-time positions available. VA program. Apply by April 1 to Dean, Graduate School.

**Cornell University**, Ithaca, New York. Apply for admission to Dean, Graduate School before March 1.

*Department of Psychology*: GRE required. Tuition: \$650 a year. Two fellowships; no work; stipend, \$800 ex. Apply before March 1 to Dean of Graduate School. Nine research assistantships; 20 hours' work; stipend, \$1,725; new students eligible. Eleven teaching assistantships; 20 hours' work; stipend, \$1,725; new students eligible. Other positions available. Apply before March 1 to Chairman, Dept. of Psych.

*School of Education*: Tuition: \$300-700 a year. Thirty scholarships; no work; stipend, \$150-1,800 sometimes ex; new students eligible. Two fellowships; no work; stipend \$400-600; new students eligible. Fourteen research assistantships; approximately 20 hours' work; stipend, \$1,000-2,000 usually ex; new students usually not eligible. Apply by March 1 to Director, School of Educ.

*Department of Child Development and Family Relationships*: Tuition: \$300 a year. Two fellowships; no work; stipend, \$2,800; new students eligible; apply before March 1 to Dr. Mary Ford. Three research assistantships; 20 hours' work; stipend, \$1,350-1,700 ex; new students eligible; apply before March 1 to Dr. Urie Bronfenbrenner. Five teaching assistantships; 20-25 hours' work; stipend, \$1,650 ex; new students eligible; apply before March 1 to Dr. Mary Ford. Other positions available.

**Dalhousie University**, Halifax, N. S., Canada. Apply for admission to the Registrar before September 15. Tuition: \$150 plus fees. Two teaching assistantships; 6 hours' work; stipend, \$500; new students eligible. Summer internships available to students. Apply by March 15 to Chairman, Dept. of Psych.

**Delaware University of**, Newark, Del. Apply for admission to Dean, Graduate School, before March 1. Tuition: approximately \$200. GRE and MAT recommended. One research assistantship; 20 hours' work; stipend, \$1,200; new students eligible. Two teaching assistantships; 20

hours' work; stipend, \$1,200 ex; new students eligible. Other part-time positions may be available. Apply by March 1 to Dr. Halsey M. MacPhee, Chairman, Dept. of Psych.

**De Paul University**, Chicago, Ill. Apply for admission to Dean, Graduate School, thirty days before beginning of quarter. Tuition: \$260. One teaching assistantship; 10-12 hours' work; stipend, ex. Apply to Chairman, Dept. of Psych.

**DePauw University**, Greencastle, Ind. Apply for admission to Executive Secretary, Graduate Council. Tuition: \$225. MAT required. One assistantship; 12 hours' work; stipend, ex; new students eligible. Apply to Dr. Kenneth S. Waggoner, Chairman, Dept. of Psych.

**Detroit University of**, Detroit 21, Mich. Apply for admission to Dean, Graduate School, before August or December 1. Tuition: approximately \$300. GRE required. Six or seven fellowships; 18 hours' work; stipend, \$1,050 ex half tuition; new students eligible. Apply by April 15 to Dr. A. A. Schneiders, Chairman, Dept. of Psych.

**Duke University**, Durham, N. C. Apply for admission to the Dean, Graduate School, before March 1. Tuition: \$470. GRE and MAT required. Number of scholarships varies; 4 hours' work; stipend, \$450-1,000; new students eligible. Number of fellowships varies; 6-8 hours' work; stipend, \$1,000-1,700; new students eligible. Number of research assistantships varies; 8-15 hours' work; stipend, \$400-1,800; new students eligible. Number of teaching assistantships varies; 10-15 hours' work; stipend, \$800-1,800; new students eligible. Other part-time positions available. VA program. USPHS stipends. Apply by March 1, but preferably before February 15, to Dean, Graduate School.

**Emory University**, Emory University, Ga. Apply for admission to Dean, Graduate School, the quarter before admission. Tuition: \$525. GRE required. Scholarships available (number unspecified); stipend, \$525; new students eligible. Four fellowships; 6 hours' work; stipend, \$1,225-2,650; new PhD students eligible. Apply by February 15 to Dean, Graduate School. Three research assistantships; 10-15 hours' work; stipend, \$1,200-1,800; new students eligible. Two teaching assistantships; 10-15 hours' work; stipend, \$1,500;

new PhD students eligible. Apply at any time to Chairman, Dept. of Psych.

**Florida State University, Tallahassee, Fla.** Apply for admission to Dean, Graduate School, before September 1. Tuition: resident, none; nr, \$350. GRE required for MA; MAT required for PhD. Three fellowships; 8 hours' work; stipend, \$450; new students eligible. Apply by July 15 to Dean, Graduate School. Fifteen research assistantships; 9 hours' work; stipend, \$750; new students eligible. Three teaching assistantships; 18 hours' work; stipend, \$2,000; new students eligible. Apply by July 15 to Chairman, Dept. of Psych.

**Florida, University of, Gainesville, Fla.** Apply for admission to the Registrar before August 15. Tuition: resident, none; nr, \$500. GRE and MAT required. Thirteen assistantships; 15 hours' work; stipend, \$700 ex; new students eligible. Apply by March 1 to Dr. E. D. Hinckley, Chairman, Dept. of Psych.

**Fordham University, New York 58, N. Y.** Apply for admission to the Registrar, Graduate School of Arts and Sciences, before July 1. Tuition: \$415. GRE may be requested; MAT desirable but not required. Nine research assistantships; 15 hours' work; stipend, \$800 ex; new students eligible. Apply before March to Dean, Graduate School.

**Fort Hays Kansas State College, Hays, Kansas.** Apply for admission to Dr. Ralph V. Coder, Chairman, Graduate Division before June 1. Tuition: resident, \$52 per semester; nr, \$89 per semester. Two scholarships; 16 hours' work; stipend, \$432 for 9 months, \$528 for 11 months; new students eligible. Apply by June 1 to Dr. H. B. Reed, Chairman, Dept. of Psych.

**George Peabody College for Teachers, Nashville 5, Tenn.** Apply for admission to the Registrar before July 1. Tuition: \$300. GRE required. One or two scholarships; no work; stipend, approximately \$500; new students eligible. Apply by March 15 to Chairman, Scholarship Committee. One fellowship; 10 hours' work; stipend, \$1,500; new students eligible. Five teaching assistantships; 6-15 hours' work; stipend, \$600-1,500; new students eligible. Apply by March 15 to Chairman, Division of Human Development and Guidance.

**George Pepperdine College, Los Angeles 44, Calif.** Apply for admission to Dr. Everett L.

Shostrom, Chairman, Dept. of Psych., before August. Tuition: \$400. GRE required. Three scholarships; no work; stipend, half ex; new students eligible. Two fellowships; 10 hours' work; stipend, ex; new students eligible. One teaching assistantship; 10 hours' work; stipend, \$200 ex; new students eligible. Other part-time positions available. Apply by August to Dr. Everett L. Shostrom, Head, Dept. of Psych.

**George Washington University, Washington 6, D. C.** Apply for admission to Admissions Office, for MA; Chairman, Dept. of Psych., for PhD, by July 1. Tuition: \$420. GRE required occasionally. Two assistantships for students working on MA; 8 hours' work; stipend, \$300; new students eligible. Apply before registration to Chairman, Dept. of Psych. Two teaching assistantships; 8-12 hours' work; stipend, \$900 ex; new students eligible. Dept. also recommends students for research-grant positions. Apply by April 1 to Chairman, Dept. of Psych.

**Georgia, University of, Athens, Ga.** Apply for admission to Dean, Graduate School, six weeks before quarter of admission. Tuition: resident, \$180; nr, \$480. GRE required. Number of fellowships varies; 6 hours' work; stipend, \$1,000 occasionally ex nr fees; new students eligible. Number of research assistantships varies; hours' work vary; stipend, varies; new students eligible. Number of teaching assistantships varies; hours' work vary; stipend, \$600-1,200 occasionally ex nr fees; new students eligible. Apply by March 1 to Dean, Graduate School, or Chairman, Dept. of Psych.

**Harvard University, Cambridge 38, Mass.** Apply for admission to Dean, Graduate School of Arts and Sciences, before May 1. Tuition: \$600.

**Department of Psychology:** Either GRE or MAT required. Four scholarships; no work; stipend, \$500-1,800; new students eligible. Four fellowships; no work; stipend, \$500-1,800; new students eligible. Apply by February 8 to Dean, Graduate School. Ten research assistantships; 10-18 hours' work; stipend, \$500-1,500; new students eligible. Five teaching assistantships; 12-15 hours' work; stipend, \$800 per semester; new students not usually eligible. Apply by May 1 to Chairman, Dept. of Psych.

**Department of Social Relations:** GRE and MAT required. Scholarships and fellowships; no work; stipend, \$300-1,000; new students eligible. Apply



by February 9 to Graduate School of Arts and Sciences. Research assistantships;  $\frac{1}{2}$  to  $\frac{3}{4}$  time required; stipend, \$640-1,920; new students not ordinarily eligible. Apply by May 1 to Professor S. A. Stouffer, Laboratory of Social Relations. Teaching assistantships;  $\frac{1}{2}$  to  $\frac{3}{4}$  time required; stipend, \$640-1,920; new students not ordinarily eligible. VA program. USPHS stipends. Apply by May 1 to Professor Talcott Parsons, Department of Social Relations.

*Graduate School of Education:* Apply for admission to Committee on Admissions, 4 Lawrence Hall, Kirkland Street, before July 1. Ten scholarships for School of Education; no work; stipend, \$600-2,000; new students eligible. Apply by April 15 to Committee on Scholarships. Two to 5 research assistantships; 20 hours' work; stipend, \$1,900; new students eligible. Apply by March 15 to Director, Laboratory of Human Development. Other part-time positions available.

**Hawaii, University of, Honolulu 14, T. H.** Apply for admission to Dean, Graduate School, two weeks before beginning of term. Tuition: \$200 plus \$20 registration fee. GRE and MAT required. Four teaching assistantships; 20 hours' work; stipend, \$1,578 ex; new students eligible. Apply by April 15 to Dean of Faculties.

**Houston, University of, Houston, Texas.** Apply for admission to Dr. L. T. Callicutt, Chairman, Dept. of Psych. before March 1. Tuition: \$400. GRE and MAT required first semester after admission. One scholarship; no work; stipend, \$1,000; new students eligible. Five teaching assistantships; 6 hours' work; stipend, \$900; new students eligible. Also, some assistantships in counseling and testing and in reading clinic. Apply by April 1 to Dr. L. T. Callicutt.

**Howard University, Washington 1, D. C.** Apply for admission to Dean, Graduate School, before September 1. Tuition: \$213. GRE administered during first term. Five scholarships; no work; stipend, \$246; new students eligible. Three fellowships; 5 hours' work; stipend, \$663; new students eligible. Apply by April 15 to Dean, Graduate School.

**Idaho, University of, Moscow, Idaho.** Apply for admission to Dean, Graduate School. Tuition: resident, none; nr, \$75 per semester. One teach-

ing assistantship; 10 hours' work; stipend, \$900 ex; new students eligible. Two assistantships in psychometry also available to psychology students. Apply by May 1 to Dr. Wm. H. Boyer, Chairman, Dept. of Psych.

**Illinois Institute of Technology, Chicago 16, Ill.** Apply for admission to Director of Admissions before August 15. Tuition: \$325-\$650 depending on number of hours. Number of teaching assistantships varies; hours' work vary; stipend, varies, plus half ex; new students eligible. It is possible to place superior graduate students whose major interest is industrial in part-time positions in business or industry in Chicago area. Apply by August 15 to Dr. P. S. Shurrager, Dept. of Psych. and Educ.

**University of Illinois, Urbana, Ill.** Apply for admission to Director of Admissions and Records before February 15. Tuition: resident, \$80; nr, \$300.

*Department of Psychology:* MAT required. Number of fellowships varies; no work; stipend, \$900-1,100 ex; new students eligible. Apply by March 1 to Dean, Graduate College. Fifty half-time research assistantships; 20 hours' work; stipend, \$1,200-1,300 ex for academic year, and \$1,600-1,730 ex for a year; new students eligible. Sixteen half-time teaching assistantships; stipend, \$1,200-1,300 ex for academic year, and \$1,600-1,730 ex for a year; new students eligible. Internships at Psych. Clinic open to third-year graduate students. VA program (not open to first-year students). USPHS stipends. Apply by March 1 to Executive Secretary, Dept. of Psych.

*College of Education:* MAT required. Large number of fellowships; no work; stipend, \$900-1,100 ex; new students eligible. Apply by February 1 to Dean, Graduate College. Large number of research assistantships; 20 hours' work; stipend, \$1,500 ex; new students eligible. Large number of teaching assistantships; 20 hours' work; stipend, \$1,500 ex; new students eligible. Other part-time positions available. Apply to Dr. F. H. Finch, 105 Gregory Hall.

**Indiana University, Bloomington, Ind.** Apply for admission to Graduate School, or Admissions Committee, Dept. of Psych., before March 15. Tuition: resident, \$4 per credit hour per semester; nr, \$11.50 per credit hour per semester. GRE and

MAT required. Fellowships (number unspecified); 10 hours' work; stipend, \$150 and reduction of class fee. Research assistantships (number unspecified); 12-15 hours' work; stipend, \$100-125. Teaching assistantships (number unspecified); 12-15 hours' work; stipend, \$90-100. New students eligible for all awards if outstanding. Some part-time positions on research contracts. VA program. USPHS stipends. Apply by March 15 to Admissions Committee, Dept. of Psych.

**Iowa State College, Ames, Iowa.** Apply for admission to Dean Ralph M. Hixon. Tuition: \$138. MAT required. Ten fellowships; 8-10 hours' work; stipend, \$650-720 part ex; new students eligible. Four research or teaching assistantships; 15-20 hours' work; stipend, \$990-1,140 part ex; new students not usually eligible. Other part-time positions available in Testing Bureau. Apply by April 1 to Chairman, Dept. of Psych.

**Iowa, State University of, Iowa City, Iowa.** Tuition: resident, \$156; nr, \$256.

*Department of Psychology:* Two scholarships; no work; stipend, ex; new students eligible. Four fellowships; no work; stipend, \$270-2,400 ex; new students eligible only for first-year level fellowships. Seventeen research assistantships; 20 hours' work; stipend, \$900-1,440 ex; new students eligible. Nine teaching assistantships; 20 hours' work; stipend, \$900-1,080 ex; new students eligible. Two assistant psychologist positions at hospital available. One counseling assistantship available in Office of Student Affairs. USPHS stipends. VA program. Apply to Dr. Judson S. Brown, Acting Head, Dept. of Psych., before March 1.

*Iowa Child Welfare Research Station:* One scholarship; no work; stipend, \$400 ex; new students eligible. Twelve research assistantships; 10-20 hours' work; stipend, \$450-1,100 ex; new students eligible. Nine teaching assistantships; 20 hours' work; stipend, \$880-1,100 ex; new students eligible. Also, some research associateships on research grants and other part-time work. Apply by February 15 to Dr. Boyd McCandless, Director, Child Welfare Research Station.

**Johns Hopkins University, The, Baltimore 18, Md.** Apply for admission to Director of Admissions before March 1. Tuition: \$650. GRE and MAT desirable, but not required. Fifteen scholarships; no work; stipend, ex; new students eligible.

Nine research assistantships; 10-20 hours' work; stipend, \$600-1,500; new students eligible. Six teaching assistantships; 10-20 hours' work; stipend, \$600-1,500; new students eligible. Scholarship is frequently coupled with assistantship. Apply by March 1 to Director of Admissions.

**Kansas City, University of, Kansas City, Mo.** Apply for admission to Director of Admissions before September 1, December 1, or May 1. Tuition: \$12 per credit hour. MAT and reading comprehension test required. Two fellowships; 20 hours' work; stipend, \$800 ex; new students eligible. Apply by August 1 to Dean of Liberal Arts.

**Kansas State College, Manhattan, Kansas.** Apply for admission to Dean Harold Howe before August 1. Tuition: resident, \$140; nr, \$280. One teaching assistantship; 22 hours' work; stipend, \$1,350; new students eligible. Eight counseling assistantships; 22 hours' work; stipend, \$1,350; new students eligible. Apply by April 1, Dean, Graduate School.

**Kansas State Teachers College, Pittsburg, Kansas.** Apply for admission to J. U. Massey, Director of Admissions and Registrar, before date of enrollment. Tuition: resident, \$120; nr, \$204. MAT required. Two scholarships; hours' work not specified; stipend, \$450; new students eligible. Two fellowships; 10 hours' work; stipend, \$500; new students eligible. Three or four student assistantships also available. Apply by June 1 to Chairman, Dept. of Psych.

**Kansas, University of, Lawrence, Kansas.** Apply for admission to Committee on Graduate Admissions before August 1. Tuition: resident, \$120 nonclinical, \$180 clinical; nr, \$260 nonclinical, \$400 clinical. Indefinite number of scholarships; no work; stipend, \$400 ex; new students eligible. Indefinite number of fellowships; no work; stipend, \$600-700 ex; new students with MA eligible. Apply by March 1 to Graduate School. Uncertain number of research assistantships; 20 hours' work; stipend, \$1,200-1,400; new students eligible. Two teaching assistantships; 20 hours' work; stipend, \$1,200-1,600; new students eligible. Clinical internships and a few positions also available. VA program. USPHS stipends. Apply by August 1 to Dept. of Psych.

**Kent State University, Kent, Ohio.** Apply for admission to Dr. Raymond Clark, Dean, Graduate School. Tuition: resident, \$153.25; nr, \$303.25. MAT not required, but recommended. Three research assistantships; 18 hours' work; stipend, \$650 ex first year, \$750 ex second year; new students eligible. Part-time hourly work and clinical internships for advanced students also available. Apply by May 15 to Dr. Raleigh M. Drake, Chairman, Dept. of Psych. One assistantship available in the Special Education Department for the school psychologist or guidance programs; half-time work; stipend, \$650 for first year, \$750 for second year. Apply to Dr. Edna R. Oswalt, Head, Dept. of Spec. Educ.

**Kentucky, University of, Lexington, Ky.** Apply for admission to the Registrar by March 1. Tuition: resident, \$130; nr, \$250. GRE required. No definite number of scholarships; no work; stipend, \$600 ex nr fees; new students eligible. No definite number of fellowships; no work; stipend, \$750 ex nr fees; new students eligible. Apply by March 25 to Dean of the Graduate School. Seven teaching assistantships; 12-15 hours' work; stipend, \$900 ex nr fees; new students eligible. Local part-time positions available for advanced students in clinical psychology. VA program. Apply by March 1 to Dept. of Psych.

**Lehigh University, Bethlehem, Pa.** Apply for admission to Office of Admissions before May 15 for fall term, or December 15 for midyear term. Tuition: \$22 per credit hour. GRE required occasionally. One scholarship; no work; stipend, ex; new students eligible. Four research assistantships; 20 hours' work; stipend, \$1,200 ex; new students eligible. One teaching assistantship; 20 hours' work; stipend, \$1,200 ex; new students eligible. Position as freshman dormitory counselor, half-time at \$1,200, also available. Apply by March 30 or December 1 to Office of Admissions.

**Long Beach State College, Long Beach, Calif.** Apply for admission to Admissions Office before August 1. Tuition: \$41. GRE required for candidacy for MA. Eight scholarships; no work; stipend, \$100; new students eligible. One fellowship; no work; stipend, \$2,400; new students eligible. Apply by March 1 to Dr. Louis J. Swanson, Assistant Dean of Students.

**Long Island University, Brooklyn 1, N. Y.** Apply for admission to Office of Admissions, Graduate School, before May 1 for summer registration; June 1, for fall semester; November 1 for spring semester. Tuition: \$450 plus fees. GRE required. Two assistantships; 20 hours' work; stipend, \$750 ex; new students eligible. Apply before above dates to Dr. Jacob I. Hartstein, Chairman, Dept. of Psych.

**Louisiana State University, Baton Rouge, La.** Apply for admission to Chairman of Admissions, Dept. of Psych., before March 15. Tuition: resident, \$60; nr, \$120. GRE desirable; MAT required. Two clinical externs; 20 hours' work; stipend, \$1,200 ex; new students only. Five research assistantships; 10 hours' work; stipend, \$500 ex; new students eligible. Two clinical interns; 20 hours' work; stipend, \$1,500 ex; new students eligible. Other positions available for advanced students in department on contract research projects. Apply by March 15 to Dr. G. B. Bell, Dept. of Psych.

**Louisville, University of, Louisville, Ky.** Apply for admission to Dr. Guy Stevenson, Dean, Graduate School. Tuition: resident, \$448; nr, \$548. GRE required. One scholarship; no work; stipend, \$448; new students eligible. Eight research assistantships; hours of work not specified; stipend, \$600-1,800; new students eligible. Two teaching assistantships; hours of work not specified; stipend, \$300-500; new students eligible. Other part-time positions available. Apply at the start of school in the fall to Chairman, Dept. of Psych. and Social Anthropology.

**Loyola University, Chicago 11, Ill.** Apply for admission to Dean, Graduate School, before June 30. Tuition: \$35 per course, \$40 per laboratory course. GRE and MAT occasionally required. Three fellowships; 20 hours' work; stipend, \$900 ex. One research assistantship; 20 hours' work; stipend, \$900 ex. Four teaching fellowships; 13 hours' work; stipend, \$1,000 and up ex; new students occasionally eligible. Positions as supervisor for clinical students in agencies also available. Apply by April 1 to Chairman, Dept. of Psych.

**MacMurray College, Jacksonville, Ill.** Apply for admission to Dean Wendell S. Dysinger before June 1. Tuition: \$1,150 for board, room, and tui-



tion for two semesters. GRE and MAT recommended. Five scholarships; no work; stipend, \$200-600; new students eligible. Three research assistantships; 12-15 hours' work; stipend, \$830; new students eligible. Other part-time positions available. Apply by May 1 to Dean Wendell S. Dysinger.

**McGill University**, Montreal 2, P. Q., Canada. Apply for admission to Dean D. L. Thomson, Graduate Faculty, before April 1. Tuition: \$250. MAT required. Eight to 12 research assistantships; 12-hour limit if work does not contribute to thesis; stipend, \$1,000-1,500; new students eligible. Four to 7 teaching assistantships; 10-hour limit if work does not contribute to thesis; stipend, \$400-700 (7-8 months); new students eligible. Apply by April 1 to Dr. D. O. Hebb, Chairman, Dept. of Psych.

**Maine, University of**, Orono, Maine. Apply for admission to Dr. Edward N. Brush, Dean, Graduate Study, before June 1. Tuition: resident, \$305; nr, \$465. GRE required. Two university scholarships; no work; stipend, ex; new students eligible. Apply by April 1 to Dean of Graduate Study. One teaching assistantship; 15 hours' work; stipend, \$1,200; new students eligible. Apply by July 1 to Chairman, Dept. of Psych.

**Manitoba, University of**, Winnipeg, Manitoba, Canada. Apply for admission to Dean, School of Graduate Studies before September 15. Tuition: \$145. One research assistantship; 6-8 hours' work; stipend, \$750; new students eligible. Apply by May 1 to Chairman, Dept. of Psych.

**Maryland, University of**, College Park, Md. Apply for admission to Dr. T. G. Andrews, Chairman, Dept. of Psych., before March 1. Tuition: \$200. GRE and MAT required. Eleven research assistantships; 10-20 hours' work; stipend, \$563, or \$1,125 ex; new students eligible. Other teaching, counseling, and contract research part-time positions available. Apply by March 1 to Dr. T. G. Andrews, Chairman, Dept. of Psych.

**Massachusetts, University of**, Amherst, Mass. Apply for admission to Dean, Graduate School, before June 1. Tuition: resident, \$100; nr, \$220. MAT required. Three fellowships; 20 hours' work; stipend, \$800 ex; new students eligible.

Three research assistantships; 20 hours' work; stipend, \$1,400; new students eligible. Two or three teaching assistantships; 10 hours' work; stipend, \$300; new students eligible. Apply by June 1 to Dr. Claude C. Neet, Chairman, Dept. of Psych.

**Miami University**, Oxford, Ohio. Apply for admission to Dean, Graduate School or Chairman, Dept. of Psych., before March 1. Tuition: \$105. One fellowship; no work; stipend, ex; new students eligible. Other part-time professional positions available at Wright Field Military Aviation Project. Apply to W. E. Smith, Dean, Graduate School.

**Miami, University of**, Coral Gables, Fla. Apply for admission to Dr. Granville C. Fisher, Chairman, Dept. of Psych., before August 15. Tuition: \$450 plus fees. GRE required. Three research assistantships; 12 hours' work; stipend, \$750 ex; new students eligible. Two teaching assistantships; 15 hours' work; stipend, \$1,500 (9 months); new students with MA or MS eligible. Apply June 1 and June 15, respectively, to Dr. Granville C. Fisher, Chairman, Dept. of Psych.

**Michigan State College**, East Lansing, Mich. Apply for admission to Dean, School of Graduate Studies before April 1. Tuition: resident, \$165; nr, \$390. MAT required. Number of scholarships vary; no work; stipend, ex; new students eligible. Number of fellowships vary; no work; stipend, ex; new students eligible. Apply by April 1 to School of Graduate Studies. Number of research assistantships varies; 10 hours' work for quarter time; 20 hours' work for half time; stipend, \$1,200-2,900 (11 months); new students eligible. Twelve teaching assistantships; 20 hours' work for half-time; stipend, \$1,400 ex (9 months); new students eligible. Part-time employment in schools and clinics available. Additional tuition scholarships for needy students; special scholarships for foreign students. VA program. Apply by April 1 to Dept. of Psych.

**Michigan, University of**, Ann Arbor, Mich. Apply for admission to Dr. Daniel Katz, Chairman, Committee on Graduate Studies before March 1. Tuition: resident, \$180; nr, \$430. MAT required. Two scholarships; no work; stipend, ex; new students eligible. Two fellowships; no work; stipend, \$500-1,500; new students eligible. Apply by March 1 to Horace H. Rackham School of Grad-

uate Studies. Twenty research assistantships; 10-20 hours' work; stipend, \$800-1,600; new students eligible. Twenty teaching assistantships; 10-20 hours' work; stipend, \$800-1,500 partial ex; new students eligible. Dept. recommends for appointments in Survey Research Center, Research Center for Group Dynamics, Psychological Clinic, Student Counseling Division, University Mental Hygiene Division of Health Service, Veterans hospitals and clinics, and various experimental research projects. VA program. USPHS stipends. Apply by March 1 to Dept. of Psych.

**Mills College, Oakland 13, Calif.** Apply for admission to Office of Record before time of registration. Tuition: \$235. One fellowship; 12-18 hours' work; stipend, ex plus residence; new students eligible. Apply by March 1 to The Secretary, Committee on Fellowship Awards.

**Minnesota, University of, Minneapolis 14, Minn.** Apply for admission to Dean, Graduate School, 30 days before quarter of entrance. Tuition: resident, \$170.55; nr, \$356.55. MAT required. Thirteen teaching assistantships; 10-20 hours' work; stipend, \$641-1,283; new students eligible. VA program. USPHS stipends. Apply to Dr. Kenneth MacCorquodale, Dept. of Psych. Four to 6 counseling instructorships; 15-20 hours' work; stipend, \$1,155-1,732; new students occasionally eligible. Eight to 10 counseling assistantships; 20 hours' work; stipend, \$1,285; new students eligible. Apply by March 1 to Assistant Dean Roger B. Page.

**Mississippi, University of, University, Miss.** Apply for admission to Dean, Graduate School before September 1. Tuition: resident, \$85; nr, \$200. One fellowship; no work; stipend, \$600 ex nr fee; new students eligible. Apply by March 15 to Dean, Graduate School. One research assistantship; 12 hours' work; stipend, \$750 ex nr fee; new students eligible. Apply by March 15 to Chairman, Dept. of Psych. Two teaching assistantships; 12 hours' work; stipend, \$600 ex nr fee; new students eligible. Apply by April 15 to Chairman, Dept. of Psych.

**Missouri, University of, Columbia, Mo.** Apply for admission to Dr. Fred McKinney, Chairman, Dept. of Psych., before April 1. Tuition: resident, none; nr, \$150-400. MAT required. Twelve

scholarships and fellowships; no work; stipend, \$600-700 ex; new students eligible. Apply by March 1 to Dean, Graduate School. Nine teaching assistantships; 20 hours' work; stipend, \$1,000 ex; new students eligible. Apply by April 1 to Dr. Fred McKinney, Chairman, Dept. of Psych. Stipends for students in education specializing in educational psychology and counseling and guidance also available. Apply to School of Education.

**Montana State University, Missoula, Mont.** Apply for admission to Dean, Graduate School before July 1. Tuition: resident, \$107; nr, \$157. GRE recommended. Candidates for MA in clinical may receive 9 months' internship at Montana State Hospital—subsistence furnished.

**Montréal, Université de, Montréal 2, P. Q., Canada.** Apply for admission to Le secrétaire-adjoint à l'Immatriculation before August 1. Tuition: resident, \$300; nr, \$360. Two scholarships; no work; stipend, \$1,000-3,000; new students eligible. One fellowship; no work; stipend, \$3,000; new students eligible. Apply in May. Three research assistantships; 15 hours' work; stipend, \$1,000-1,200; new students not eligible. Two laboratory assistantships; 20 hours' work; stipend, \$540; new students not eligible. One research assistantship in child development; stipend, up to \$3,000. Apply to Rev. Father Noël Mailloux, Institut de Psychologie, C.P. 6128, Montréal 2, P. Q., Canada.

**Nebraska, University of, Lincoln, Neb.** Apply for admission to Dean, Graduate College before March 1. Tuition: resident, \$160; nr, \$360. GRE advisable, MAT required. Eight assistantships (both research and teaching); 12 hours' work; stipend, \$750 ex; new students eligible. Two assistantships in counseling bureau also available. VA program. USPHS stipends. Apply by March 1 to Chairman, Dept. of Psych.

**New Brunswick, University of, Fredericton, N. B., Canada.** For admission apply to Dean F. J. Toole before May 1. Tuition: \$215 a year. Two fellowships; 8 hours' work; stipend, \$500-750 ex; new students eligible. Apply before March 1 to Dean F. J. Toole, School of Graduate Studies.

**New Hampshire, University of, Durham, N. H.** Apply for admission to Dean Herbert J. Moss before May 1. Tuition: resident, \$250; nr,

\$500. Twenty scholarships; stipend, ex. Teaching assistantships (number unspecified); 20 hours' work; stipend, \$1,000 ex; new students eligible. Apply by April 1 to Dr. Herbert A. Carroll, Chairman, Dept. of Psych.

**New Mexico Highlands University**, Las Vegas, N. M. Apply for admission to Dr. Anna Y. Martin, Acting Chairman, Dept. of Psych., before August 1. Tuition: resident, \$105; nr, \$210 plus fees. GRE required. Five scholarships; no work; stipend, ex state tuition; new students eligible. Apply about August 1 to Dr. Anna Y. Martin, Acting Chairman, Dept. of Psych.

**New Mexico, University of**, Albuquerque, N. M. Apply for admission to Dean, Graduate School, before April 1. Tuition: resident, \$100; nr, \$200. GRE and MAT required. Six university fellowships; no work; stipend, \$500 ex nr tuition; new students eligible. Four teaching assistantships; 15 hours' work; stipend, \$900 ex nr tuition; new students eligible. Apply by April 1 to Dean, Graduate School.

**New School for Social Research**, Psychology Division of Dept. of Philosophy and Psychology, New York 11, N. Y. Apply for admission to Psychology Division. Tuition: \$18 per point. Scholarships and fellowships are for entire school; new students eligible; apply by April 30 to Graduate Faculty Registrar. One research assistantship; 40 hours' work; stipend, \$2,000 ex. One or two teaching assistantships; 20 hours' work; stipend, \$2,500-3,000 ex. Apply to Dr. Mary Henle, Spokesman, Psychology Division.

**New York University**, New York 3, N. Y.

*Department of Psychology:* Apply for admission to Dean, Graduate School of Arts and Science, before March 15. Tuition: approximately \$600. GRE and MAT required. Four research assistantships; 20 hours' work; stipend, \$1,000 ex three courses; new students eligible. Fourteen teaching assistantships; 20 hours' work; stipend, \$800-1,000 ex three courses; new students eligible. Other part-time positions available. VA program. Apply by March 1 to Dr. Stuart W. Cook, Chairman, Dept. of Psych.

*Department of Educational Psychology:* Apply for admission to Admissions, School of Education. Tuition: \$22 per point. Four teaching fellowships;

6 hours' work; stipend, \$1,200-1,800 ex; new students eligible. Part-time positions also available as assistant in statistics laboratory, assistant in reading clinic, and assistant in charge of tests and laboratory supplies. Apply by March 1 to Director of Admissions, School of Education.

**North Carolina State College**, Raleigh, N. C. Apply for admission to Dean D. B. Anderson, Graduate School before May 1. Tuition: resident, \$231; nr, \$321. GRE and MAT required. Ten research assistantships; 15 hours' work; stipend, \$1,200; new students eligible. One teaching assistantship; 3 hours' work; stipend, \$1,200; new students eligible. Part-time positions available with Bureau of Industrial Psychology Services. Apply by May 1 to Dr. D. J. Moffie, Chairman, Dept. of Psych.

**North Carolina, University of**, Chapel Hill, N. C. Apply for admission to Dean, Graduate School, before March 1. Tuition: resident, \$150; nr, \$360. GRE and MAT required. University scholarships available; no work; stipend, \$900; new students eligible. Fellowships available; hours' work vary; stipend varies; new students eligible. Apply by March 1 to Graduate School. Five to seven teaching assistantships; hours' work unspecified; stipend, \$684-900 ex; new students eligible. Apply by March 1 to Graduate School. Six to ten research assistantships; 15-30 hours' work; stipend, \$900-2,120; new students eligible. In many awards students are paid flat rate plus amount to cover tuition. Part-time professional positions may be available in Psychometric Laboratory. VA program. USPHS stipends. Apply to Chairman, Dept. of Psych. Assistantships in Institute for Research in Social Science made on department recommendation; address inquiries to Institute for Research in Social Science.

**Northwestern University**, Evanston, Ill. Apply for admission to the Graduate School before April 1. Tuition: \$500. MAT required. One to three scholarships; no work; stipend varies, ex; new students eligible. One fellowship; no work; stipend, \$1,000 ex. Nine teaching assistantships; 15 hours' work; stipend, \$1,050 ex; new students eligible. Other part-time positions are available. VA program. USPHS stipends. Apply March 1 to The Graduate School.



**Oberlin College, Oberlin, Ohio.** Apply for admission to Dean Blair Stewart. Tuition: \$500 plus fees. One scholarship; no work; stipend, ex; new students eligible. Other part-time positions available. Apply by March 15 to Dean Blair Stewart.

**Ohio State University, Columbus 10, Ohio.** Apply for admission to Entrance Board before February 28. Tuition: resident, \$35; nr, \$110. One or two scholarships; no work; stipend, \$600-800 ex; new students eligible. Sometimes one fellowship; no work; stipend, \$1,000 ex; new students seldom eligible. Apply by February 15 to Graduate School. Ten research assistantships; 15 hours' and up work; stipend, \$900 up ex; new students occasionally eligible. Apply by February 28 to staff member in proposed field of specialization. Fifteen teaching assistantships; 10 hours' work plus preparation and conferences; stipend, \$1,200 ex; new students eligible. VA program. USPHS stipends. Apply by February 28 to Entrance Board.

**Ohio Wesleyan University, Delaware, Ohio.** Apply for admission to Miss Audrey M. Parker before May 1. Tuition: \$250 per semester. GRE requested but not required. Six fellowships; 21 hours' work; stipend, ex and room and board; new students eligible. Apply May 1 to Miss Audrey M. Parker.

**Oklahoma Agricultural and Mechanical College, Stillwater, Okla.** Apply for admission to Head, Dept. of Psych. before September 1. Tuition: \$66. Two teaching assistantships; 12 hours' work; stipend, \$900-1,200; new students eligible. Apply by June 1 to Head, Dept. of Psych.

**Oklahoma, University of, Norman, Okla.** Apply for admission to Dean of Admissions and Registrar before either March 15 or July 15. Tuition: resident, \$132; nr, \$372. GRE and MAT recommended. Two or three scholarships; 4 hours' work; stipend, \$150-200 ex nr fee and ex half resident fee; new students eligible. One or two fellowships; no work; stipend, \$300-600 ex nr fee and ex half resident fee; new students eligible. Four research assistantships; 20-22 hours' work; stipend, \$900 ex nr fee and ex half resident fee; new students eligible. Eight to ten teaching and graduate assistantships; 20-22 hours' work; stipend, \$900 (MS candidates)-\$1,200 (PhD candi-

dates) ex nr fee and ex half resident fee; new students eligible. Other part-time positions available. Apply by March 15 to Dean of Graduate College.

**Omaha, Municipal University of, Omaha 1, Neb.** Apply for admission to E. M. Hosman, Chairman, Graduate Studies before August 15. Tuition: resident: \$8 per credit hour; nr, \$12 per credit hour. One teaching assistantship; hours' work and stipend unspecified. Apply by May 1 to Chairman, Dept. of Psych.

**Oregon, University of, Eugene, Oregon.** Apply for admission to Registrar's Office before September 15. Tuition: \$150. Occasional scholarships; no work; stipend, \$500 part ex; new students eligible. Seven graduate assistantships; 15-16 hours' work; stipend, \$800-1,000 part ex; new students eligible. One or two research assistantships; 15-16 hours' work; stipend, \$800-1,000 part ex; new students eligible. One teaching fellowship; 15-16 hours' work; stipend, \$1,200 part ex; new students eligible. Apply by March 15 to Graduate School.

**Ottawa, University of, Ottawa, Ont., Canada.** Apply for admission to the Registrar before June 1. Tuition: \$250. Two research assistantships; 15 hours' work; stipend, \$1,000 (10 months). Knowledge of French is necessary for assistantships; not for studies. Apply by March 1 to Chairman, Dept. of Psych.

**Pennsylvania State College, State College, Pa.** Apply for admission to Dean of Admissions before March 1. Tuition: resident, \$205; nr, \$425. MAT required. Six scholarships; 5 hours' work; stipend, ex; new students eligible. Four fellowships; no work; stipend, \$1,000-2,400 ex. Four research assistantships; 10-20 hours' work; stipend, \$560-1,120 ex; new students eligible. Ten teaching assistantships; 10-20 hours' work; stipend, \$560-1,120 ex; new students eligible. VA program. USPHS stipends. Apply by March 1, Dr. C. R. Carpenter, Chairman, Dept. of Psych. Internships and assistantships available in Psychological Clinic after one semester. Instructional Film Research Program offers fellowships to advanced students of other colleges who wish to use its facilities for their doctoral research.

**Pennsylvania, University of, Philadelphia 4, Pa.** Apply for admission to Dean, Graduate

School before February 18. Tuition: \$30 per semester credit, or \$700 for two terms. GRE recommended. Two to four scholarships; no work; stipend, 0-\$400 ex; new students eligible. One to two fellowships; no work; stipend, \$200-1,000 ex; new students eligible. Apply by February 18 to Dean of the Graduate School. Two to four research assistantships; 20 hours' work; stipend, \$1,000-1,100 ex; new students eligible. Fifteen to 18 laboratory assistantships; 20 hours' work; stipend, \$1,000-1,100 ex; new students eligible. Apply by February 18 to Chairman, Dept. of Psych. VA program. USPHS stipends. Occasionally other part-time positions available.

**Pittsburgh, University of, Pittsburgh 13, Pa.** Apply for admission to Chairman, Admissions Committee before March 1. Tuition: \$12.50 per semester credit hour. GRE and MAT required. Two scholarships; no work; stipend, \$1,000 ex; new students eligible. Two fellowships; no work; stipend, \$1,000; new students eligible. Eleven research assistantships; 20 hours' work; stipend, \$1,530-2,000 occasionally ex; new students eligible. Ten teaching assistantships; 6 class hours' work; stipend, \$1,200 ex; new students at MA or above level eligible. USPHS stipends. VA program. Apply by March 1 to Dr. R. A. Patton, Chairman, Dept. of Psych.

**Portland, University of, Portland 3, Oregon.** Apply for admission to Rev. Joseph S. McGrath, C.S.C., Dean, Graduate School, before August 1. Tuition: \$425. GRE required. Three fellowships; 10-12 hours' work; stipend, \$720 ex; new students eligible. Two psychometric positions and one counseling position available to advanced graduate students. Apply by August 1 to Rev. Joseph S. McGrath, C.S.C.

**Princeton University, Princeton, N. J.** Apply for admission to Dean H. S. Taylor, Office of the Graduate School by March 1. Tuition: \$600. GRE required. Three scholarships; no work; stipend, \$600; new students eligible. Three fellowships; no work; stipend, \$800-1,600; new students eligible. Five teaching assistantships; half-time work; stipend, \$1,200-1,700; new students eligible. Part-time research assistantships also available. Apply by March 1 to Dean H. S. Taylor, Office of the Graduate School. The Educational Testing Service offers \$2,375 fellowships,

which include part-time work. Applications should be made to Dr. Harold Gulliksen, 20 Nassau Street, Educational Testing Service, Princeton, N. J.

**Purdue University, Lafayette, Ind.** Apply for admission to Dean, Graduate School before March 1. Tuition: resident, \$130; nr, \$330. MAT required for clinical students only. Four special fellowships; no work; stipend, \$500 ex except for \$60 (10 months); new students only. Six fellowships; no work; stipend, \$1,200 ex except for \$60 (12 months). Eight research assistantships; 20 hours' work; stipend, \$1,200 ex except for \$60 (12 months); new students eligible. Sixteen teaching assistantships; 20 hours' work; stipend, \$1,500 ex except for \$60 (10 months); new students eligible. Other part-time positions available. VA program. USPHS stipends. Apply by March 1 to Dean, Graduate School.

**Queen's University, Kingston, Ont., Canada.** Apply for admission to the Registrar before September 1. Tuition: \$200 per year. GRE and MAT required. Fellowships for graduate work mainly in clinical psychology may be available. Apply to Dr. J. M. Blackburn for possible stipends of all kinds.

**Radcliffe College, Cambridge, Mass.** Apply for admission to Dean, Graduate School before May 1. Tuition: \$600. Either GRE or MAT required. One scholarship; no work; stipend, \$500-1,500; new students eligible. Apply by February 8 to Dean, Graduate School at Radcliffe College. (For fellowships and research and teaching assistantships, see announcement under Harvard University.)

**Richmond Professional Institute, Richmond, Va.** Apply for admission to Dr. V. J. Bieliauskas, Director, School of Clinical and Applied Psychology. Tuition: resident, \$200; nr, \$360. GRE and MAT required at discretion of Admissions Committee. Three scholarships; no work; stipend, two at \$100, one at \$500; new students eligible. One teaching fellowship; 10 hours' work; stipend, \$800; new students eligible. Four counselorships; 8 hours' work; stipend, one at \$250 plus maintenance, three at \$400 plus maintenance; new students eligible. Apply by June 1 to Dr. V. J. Bieliauskas, Director, School of Clinical and Applied Psychology.

**Richmond, University of, Richmond, Va.** Apply for admission to Dean, Graduate School. Tuition: \$300. One research assistantship; 10 hours' work; stipend, \$700; new students eligible. Apply by April 1 to Chairman, Dept. of Psych.

**Rochester, University of, Rochester 7, N. Y.** Apply for admission to Dean, Graduate School. Tuition: \$23 per credit hour. GRE required. Scholarships limited by number of students accepted; 0-5 hours' work; stipend, ex; new students eligible. Three fellowships; no work; stipend, \$1,200-2,400; new students eligible. Thirteen research assistantships; 15-20 hours' work; stipend, \$1,100-1,600 ex if support is needed; new students eligible. Eight teaching assistantships; 15 hours' work; stipend, \$1,100-1,400 ex if support is needed; new students eligible. VA program. USPHS stipends. Other part-time positions available. Apply by March 15 to Dean, Graduate School.

**Roosevelt College, Chicago, Ill.** Apply for admission to Mr. Howard Winebrenner, Director of Admissions. Tuition: approximately \$400 for two semesters. GRE not required but desirable. MAT not required but some ability test is recommended. Two scholarships; no work; stipend, \$400; new students eligible. Two research assistantships; 10 hours' work; stipend based on hourly rate; new students eligible. Apply by first of month in which semester opens to Dr. George W. Hartmann, Chairman, Dept. of Psych.

**Sacramento State College, Sacramento, Calif.** Apply for admission to Registrar before September 15. Tuition: \$43. Student assistantships available; stipend, 90¢ an hour.

**St. Louis University, St. Louis, Mo.** Apply for admission to Dean, Graduate School before April 1. Tuition: \$17.50 per semester. MAT recommended. Two fellowships; no work; stipend, \$1,000; new students eligible. Apply by April 1 to Dean, Graduate School. One research assistantship; 20 hours' work; stipend, \$1,100; new students eligible. Apply by April 1 to Director, Dept. of Psych.

**San Diego State College, San Diego, Calif.** Apply for admission to Dr. Richard Madden, Chairman Graduate Council before August 15. Tuition: \$28. MAT required. Possibly 2 to 6 student re-

search assistantships on various task contracts will be available. The Naval Electronics Laboratory also employs about 25 students.

**San Francisco State College, San Francisco 2, Calif.** Apply for admission to Dr. Louis Levine, Chairman, Dept. of Psych. before August 19. Tuition: \$20.50 for one semester. GRE required. Several part-time internships available.

**Sarah Lawrence College, Bronxville 8, N. Y.** Apply for admission to Committee on Graduate Studies. Tuition: \$500. A limited number of partial and full tuition scholarships is offered.

**Saskatchewan, University of, Saskatoon, Saskatchewan, Canada.** Apply for admission to the Registrar before September 19. Tuition: \$175. Several university scholarships; apply to Registrar. One research assistantship (graduate student reader); 8 hours' work; stipend, \$250; new students eligible. Apply by September 19 to Chairman, Dept. of Psych.

**Smith College, Northampton, Mass.** Apply for admission to Committee on Graduate Study before September 1. Tuition: \$550. GRE recommended, but not always required. One or two scholarships; no work; stipend, \$550 ex or part ex; new students eligible. One fellowship; no work; stipend, \$300-1,000 ex; new students eligible. Apply March 1 to Committee on Graduate Study. One or two teaching assistantships; 20 hours' work; stipend, \$1,000 ex; new students eligible. Apply by April 1 to Chairman, Dept. of Psych.

**South Carolina, University of, Columbia, S. C.** Apply for admission to Dr. W. H. Callcott, Dean of the Graduate School, by August 1. Tuition: resident, \$40; nr, \$125. GRE required, but may be taken after admission. Adjustable number of fellowships; no work; stipend, \$500-1,000; new students eligible. Apply by March 1 to Dean W. H. Callcott, Graduate School. Two to three teaching assistantships; 3 hours' per section taught; stipend, \$200 per section per semester (\$400 maximum); new students eligible. Other part-time positions available in Student Personnel Bureau. Practicum is available for clinical students in Mental Hygiene Clinic and State Hospital. Apply by May 15 to Dr. M. K. Walsh, Chairman, Dept. Psych. and Philosophy.



**South Dakota, University of, Vermillion, S. Dak.** For admission apply to Dean H. S. Schell before August 1. Tuition: resident, \$84; nr, \$126. GRE required. One fellowship; no work; stipend, \$300; new students eligible; apply by August 1. One research assistantship; approximately 20 hours' work; stipend, \$1,200-1,800 ex nr fee; new students eligible; apply by April 15. Two teaching assistantships; 12 hours' work; stipend, \$1,000 ex nr fee; new students eligible; apply May 1. Clinical internships and nursery school teacher position also available. Address applications to Dr. H. V. Cobb, Chairman, Dept. of Psych.

**Southern California, University of, Los Angeles, Calif.** Apply for admission to Dr. Constance Lovell, Dept. of Psych., before March 1. Tuition: \$20 a unit (\$500-600 a year). MAT required. Graduate Survey Examination must be taken during first year. Number of scholarships varies; no work; stipend, ex; new students eligible. Apply by March 1 to Committee on Student Aid. Three fellowships; no work; stipend, \$1,600-2,400. Eight teaching assistantships; 9-20 hours' work; stipend, \$570-1,520. VA program. USPHS stipends. Apply by March 1 to Dr. Constance Lovell, Dept. of Psych.

**Southern Methodist University, Dallas 5, Texas.** Apply for admission to Dr. Hemphill Hosford, Acting Dean of the Graduate School. Tuition: \$500. GRE occasionally required. University scholarships; 3 hours' work; stipend, ex; new students eligible. Apply to Dean of the Graduate School. One fellowship in personnel and industrial psychology; no work; stipend \$1,500; new students eligible. Apply by May 1 to Chairman, Dept. of Psych. Three assistantships; 5 hours' work; stipend, \$180; new students eligible. Apply at any time to Dean of the Graduate Office.

**Springfield College, Springfield, Mass.** Apply for admission to Director of Graduate Studies before June 15. Tuition: \$15 per credit hour. MAT required. Five graduate assistantships; 6-12 hours' work; stipend, \$200-400; new students eligible. Other part-time positions available. Apply by May 15 to Director of Graduate Studies.

**Stanford University, California.** Apply for admission to Dr. Paul R. Farnsworth before August 15. Tuition: \$660. University scholarships

and fellowships available; new students eligible. Apply by February 15 to Graduate Division. Twelve research assistantships; 10 hours' work; stipend, \$1,500; new students usually not eligible. Ten teaching assistantships; 10 hours' work; stipend, \$1,500; new students usually not eligible. USPHS stipends. VA program. Apply by April 1 to Dept. of Psych.

**Swarthmore College, Swarthmore, Pa.** Apply for admission to Dr. Hans Wallach, Acting Chairman, Dept. of Psych., before March 15. Tuition: \$600 plus \$50 general fee. Two research assistantships; 20 hours' work; stipend, \$800 ex; new students eligible. Apply by March 15 to Dr. Hans Wallach, Acting Chairman, Dept. of Psych.

**Syracuse University, Syracuse, N. Y.** Apply for admission to Dean John Harriman, Graduate School. Tuition: \$650 or \$20 per credit hour. MAT recommended. Three scholarships; 10 hours' work; stipend, \$600 for 10 months; new students eligible. Apply by March 1 to Dept. of Psych. Usually 1 to 3 fellowships; no work; stipend, \$1,200; new students not eligible. Apply by March 1 to Graduate School. Six research assistantships; 20 hours' work; stipend, \$1,500 for 12 months; new students eligible. Five teaching assistantships; 20 hours' work; stipend, \$1,200 for 10 months, ex for two of them; new students eligible. Other positions available on contract research projects. Apply by March 1 to Dept. of Psych.

**Tennessee, University of, Knoxville, Tenn.** Apply for admission to Dean, Graduate School before March 15. MAT required. Tuition: resident, \$150 a year; nr, \$375 a year. Four research assistantships; 10 hours' work; stipend, \$800 ex (\$600 ex for academic year); new students eligible. Six teaching assistantships; 10 hours' work; stipend, \$600-800 ex; new students eligible. VA program. Other positions available. Apply before March 15, Dean, Graduate School.

**Temple University, Philadelphia, Pa.** Apply for admission to Dean William T. Caldwell, College of Liberal Arts for Master's degree, to Dr. C. H. Smeltzer, Chairman, Dept. of Psych. for PhD degree, before April 1. GRE required. Tuition: \$15 per semester hour. Twelve research assistantships; hours of work vary; stipend, \$900-1,000 ex; new students eligible. Six teaching assistantships; hours

of work vary; stipend, \$650 per teaching hour; new students eligible. Other positions available. Apply before April 1 to Chairman, Dept. of Psych.

**Texas Christian University, Fort Worth, Texas.** Apply for admission to Dr. A. T. DeGroot, Dean of Graduate School, week before registration. GRE required. Tuition: \$360 a year. No scholarships or fellowships specifically for psychology graduate students, but some aids may be made available.

**Texas State College, North, Denton, Texas.** Apply for admission to Dr. Jack Johnson before August 1. Tuition: resident, \$40 per semester; nr, \$150 per semester. One research assistantship; hours' work unspecified; stipend, \$300; new students eligible. One teaching assistantship; hours' work, teach one three-hour class; stipend, \$50 per month of teaching; new students eligible. Apply by April to Dr. Merl E. Bonney, Chairman, Dept. of Psych.

**Texas Technological College, Lubbock, Texas.** Apply for admission to the Registrar one month prior to the beginning of any semester. Tuition: resident, \$50; nr, \$300. Nine counseling assistantships (6 women, 3 men); 14 hours' work; stipend, \$810 ex except nr fees; new students eligible. One teaching assistantship; 9 hours' work; stipend, \$500 ex except nr fees; new students eligible. Apply by August 1 to Dr. Lehman C. Hutchins, Chairman, Dept. of Psych.

**Texas, University of, Austin, Texas.**

*Department of Psychology:* Apply to Dr. Wayne H. Holtzman, Executive Secretary, Dept. of Psych. Tuition: resident, \$25 a year; nr, \$250 a year. MAT required. Seven scholarships; no work; stipend, \$300 ex; new students eligible; apply at registration to Graduate Dean. Five fellowships; maximum of 20 hours' work; stipend, \$1,080 ex; new students eligible; apply before March 15 to Chairman, Dept. of Psych. Twenty-five research assistantships; 20 hours' work; stipend, av. \$1,470; new students eligible. Three teaching assistantships; maximum of 12 hours' work; stipend, max. \$345.60, usually ex; new students eligible. VA program. Apply at registration to Chairman, Dept. of Psych.

*Department of Educational Psychology:* Apply for admission to Dr. O. B. Douglas, Chairman, before September 15. Tuition: resident, \$50 a year; nr, \$300 a year. GRE required. Three teaching

assistantships; 20 hours' work; stipend, \$1,040; new students eligible. Other positions available. Apply before September 1 to Chairman, Dept. Educ. Psych.

**Toledo, University of, Toledo, Ohio.** Apply for admission to Chairman, Dept. of Psych. before August 1. Tuition: resident, \$210 a year; nr, \$290 a year. Six scholarships; 20 hours' work; stipend, \$1,200; new students eligible. Other positions available. Apply before June 1 to Head, Psych. Dept.

**Tufts College, Medford 55, Mass.** Apply for admission to Dean, Graduate School before April 1. Tuition: \$550. GRE and MAT recommended. One scholarship; no work; stipend, ex; new students eligible. Three research assistantships; 20 hours' work; stipend, \$1,200 ex for 11 months; new students eligible. One teaching assistantship; 20 hours' work; stipend, \$1,000 ex (10 months); new students eligible. Other part-time positions available. The Institute for Applied Experimental Psychology, in the Department, employs several full-time students who have had one or more years of graduate work who may or may not have the MA. Inquiries are invited. Under special circumstances, a PhD candidate might be accepted. Apply by April 1 to Dean, Graduate School.

**Tulane University, New Orleans, La.** Apply for admission to Graduate Dean preferably before June 1. GRE required. Tuition: \$500 a year. Scholarships; no work; stipend, \$400-1,000; new students eligible. Fellowships; no work; stipend, \$1,200-1,500; new students eligible. Ten research assistantships; hours of work vary; stipend, \$800-1,400, sometimes ex; new students eligible. Six teaching assistantships; 12 hours' work; stipend, \$800 ex; new students eligible. Other positions available. Apply before March 2 to Dean of the Graduate School.

**Tulsa, University of, Tulsa, Okla.** Apply for admission to Dean L. S. McLeod, Graduate Division. Tuition: \$400. One or two graduate assistantships; 12 hours' work; stipend, \$495 (9 months); new students eligible. Apply to Dr. L. S. McLeod, Graduate Division.

**Utah State Agricultural College, Logan, Utah.** Apply for admission to Dean Stewart Williams or

Dr. Arden Frandsen before May 15. Tuition: resident, \$100; nr, \$205. Four counseling assistantships; 10 hours' work; stipend, \$425-850; new students eligible. Other part-time positions also available. Apply by May 15 to Dr. Arden Frandsen, Chairman, Dept. of Psych.

**Utah, University of, Salt Lake City, Utah.** Apply for admission to Dean, Graduate School, before August. Stipend: resident, approximately \$150; nr, approximately \$300. GRE recommended. Occasionally some scholarships and fellowships available through grants. Four research assistantships; 12 hours' work; stipend, \$750 ex nr fee; new students eligible. Five teaching assistantships; hours of work vary; stipend, \$65 per credit per quarter ex nr fee; new students eligible. Apply by June to Chairman, Dept. of Psych.

**Vanderbilt University, Nashville, Tenn.** Apply for admission to Dean of the Graduate School before February 15. GRE and MAT required. Tuition: \$500 a year. Two scholarships; no work; stipend, \$750-1,000; new students eligible. Four fellowships; 10-20 hours' work; stipend, \$1,000-2,000; new students eligible. Four research assistantships; 10-12 hours' work; stipend, \$800-1,200; new students eligible. Three teaching assistantships; 15-20 hours' work; stipend, \$1,200-1,500; new students eligible. VA program. Other positions available. Apply before February 15 to Dean of Graduate School.

**Vassar College, Poughkeepsie, New York.** Apply for admission to Dean before March 1. Tuition: \$475 a year. One fellowship; no work; stipend, \$1,500; new students eligible. Two combined research and teaching assistantships; 15-20 hours' work; stipend, \$1,200 ex; new students eligible. Apply before March 1 to Dr. Dwight W. Chapman, Chairman, Dept. of Psych.

**Vermont, University of, Burlington, Vt.** Apply for admission to Dean C. E. Braun, Graduate College. GRE required. Tuition: resident, \$14 per semester hour; nr, \$17.50 per semester hour. Fellowships and scholarships awarded to the most promising candidates for graduate work irrespective of department.

**Virginia State College, Petersburg, Va.** Apply for admission to Director, Graduate Division. Tuition: resident, \$200 a year; nr, \$250 a year. Ten

research and teaching assistantships; 12-15 hours' work; stipend, \$200-1,000; new students eligible. Apply before June 1 to Director, Graduate Division.

**Virginia, University of, Charlottesville, Va.** Apply for admission to Dean of Graduate School before June 1. Tuition: resident, \$210; nr, \$360. Fellowships; no work; stipend, \$500-1,000 ex; new students eligible; apply before March 1 to Dean of Graduate School. Research assistantships; 15 hours' work; stipend, \$600-1,000; new students eligible. Teaching assistantships; 6-12 hours' work; stipend, \$200-600; new students eligible. Apply by June 1 to Dr. Frank A. Geldard, Chairman, Dept. of Psych.

**Washington, State College of, Pullman, Wash.** Apply for admission to Dean of Graduate School before June 1. Tuition: resident, \$110 a year; nr, \$270 a year. Two to four research assistantships; 20 hours' work; stipend, \$1,200-2,000 ex nr; new students eligible; apply before April 1. Six teaching assistantships; 20 hours' work; stipend, \$1,200-2,000 ex nr; new students eligible; apply before March 15. Thirteen counseling assistantships open. Apply to Dr. James H. Elder, Chairman, Dept. of Psych.

**Washington University, St. Louis, Mo.** Apply for admission to Dean, Graduate School of Arts and Sciences, before March 1. MAT required. Tuition: \$525 a year. Scholarships; no work; stipend, \$450-1,500; new students eligible. Fellowships; no work; \$500-1,500. Research assistantships; 10-20 hours' work; stipend, \$690-2,000. Teaching assistantships; 20 hours' work; \$690-1,380. VA program. Other positions available. Apply before March 1 to Dr. Marion E. Bunch, Chairman, Psych. Dept.

**Washington, University of, Seattle 5, Wash.** Apply for admission to Graduate School for general admission; to Committee on Selection for department admission before April 1. MAT required. Tuition: resident, \$165; nr, \$315 a year. One scholarship; no work; stipend, \$1,200; new students eligible. Two fellowships, 20 hours' work; stipend, \$1,503 ex; new students eligible. Three research assistantships; 20 hours' work; stipend, \$1,125 ex; new students eligible. Fifteen teaching assistantships: five, 20 hours' work, stipend \$1,503 ex, new students eligible; two, 20 hours' work, sti-



pend \$1,125 ex, new students eligible; eight, 10 hours' work, stipend \$487.50, new students eligible. USPHS stipends. VA program. Apply before April 1 to Committee on Selection.

**Wayne University, Detroit, Mich.** Apply for admission to Dr. William C. F. Krueger, Chairman, Dept. of Psych. GRE required. Tuition: resident, \$74 a year; nr, \$100 a year. Four laboratory and teaching assistantships; 12 hours' work; stipend, \$384; new students eligible. Two teaching assistantships; 20 hours' work; stipend, \$1,000 ex; new students eligible. Apply to Dr. D. N. Elliott, Chairman, Graduate Committee, Psych. Dept.

**Wellesley College, Wellesley, Mass.** Apply for admission to Dean of Graduate Instruction before March 1. Tuition: \$500 a year. Three teaching assistantships; 24 hours' work; stipend, \$900-1,000 ex; new students eligible. Apply before March 1 to Dr. Michael J. Zigler.

**Wesleyan University, Middletown, Conn.** Apply for admission to Dr. John W. Spaeth before May 1. GRE required. Tuition: \$600 a year. Two research assistantships; 20 hours' work; stipend, \$1,600 ex; new students eligible. One teaching assistantship; 20 hours' work; stipend, \$1,600 ex; new students eligible. Apply before May 1 to Dr. R. H. Knapp, Chairman, Dept. of Psych.

**West Virginia University, Morgantown, W. Va.** Apply for admission to Dr. Quin F. Curtis, Chairman, Dept. of Psych., before May 1. MAT required. Tuition: resident, \$84 a year; nr, \$234 a year. Two teaching assistantships; 15-20 hours' work; stipend, \$1,200 ex; new students eligible. Apply before May 1 to Dr. Quin F. Curtis.

**Western Ontario, University of, London, Ont., Canada.** Apply for admission to Dr. R. A. Allen, Dean of the Faculty of Graduate Studies, before July 1. Tuition: \$230 a year. Two to four fellowships; 6 hours' work; stipend, \$600-1,000; new students eligible. Apply before March 31 to Dr. R. B. Liddy, Chairman, Dept. of Psych.

**Western Reserve University, Cleveland 6, Ohio.** Apply for admission to Director of Admissions. MAT required. Tuition: \$20 per credit hour.

*Department of Psychology:* Scholarships; no work; stipend varies; new students eligible; apply

before September 1. One fellowship; no work; stipend, \$1,200 up. One research assistantship; 20 hours' work; stipend, \$900-1,800 ex. Two teaching fellowships; 20 hours' work; stipend, \$900-1,800 ex. Six teaching assistantships; 15 hours' work; stipend, \$700-900 ex; new students eligible. VA program. USPHS stipends. Other positions available. Apply before March 1 to Office of Admissions.

*Research Institute and the Vocational Counseling Center.* Twenty-five research associateships and research assistantships.

**Wisconsin, University of, Madison, Wis.** Apply for admission to Prof. E. E. Baughman, Admissions Committee, by June 1, preferably earlier. Tuition: resident, \$150 a year; nr, \$300 a year. Four scholarships; no work; stipend, ex nr; new students eligible. Four fellowships, no work; stipend, \$1,150-1,500 ex nr; new students eligible. Thirty research assistantships; 20 hours' work; stipend, \$1,150-2,830 ex nr; new students eligible. Fifteen teaching assistantships; stipend, \$1,150-1,380 ex nr; new students eligible. USPHS stipends. VA program. Other positions available. Apply before February 1 to Prof. E. E. Baughman, Admissions Committee, Dept. of Psych.

**Wyoming, University of, Laramie, Wyo.** Apply for admission to Director of Admissions before August 15. Tuition: resident, \$156 a year; nr, \$366 a year. Six scholarships; no work; stipend, ex; new students eligible. Two research assistantships; 15 hours' work; stipend, \$720-1,000 ex; new students eligible. Apply by March 1 to Dean, Graduate School. One teaching assistantship; 8 hours' work; stipend, \$720 ex; new students eligible. Apply before March 1 to Head, Department of Psych. and Philosophy.

**Yale University, New Haven, Conn.** Apply for admission to Office of the Dean of the Graduate School preferably before February 15; final deadline, June 1. GRE required. Tuition: \$500 a year. Two to four scholarships; no work; stipend, \$250-500; new students eligible. Eight to ten fellowships; no work; stipend, \$1,200-1,500; new students eligible. Twelve to eighteen research assistantships; 10-20 hours' work; stipend, \$750-1,500; new students eligible. Three to five teaching assistantships; 10-20 hours' work; stipend, \$750-1,500; new students eligible. VA program. USPHS sti-

pend. Apply before February 15 to Office of the Dean of the Graduate School.

Yeshiva University, New York 33, N. Y. Apply for admission to Dr. Jacob I. Hartstein, Dean, Graduate Division before June 1 for fall term; November 1 for spring term. Tuition: \$270-395. GRE required. Part-time professional positions available in the Psychological Clinic.

#### REFERENCES

1. AMERICAN PSYCHOLOGICAL ASSOCIATION. OFFICE OF THE EXECUTIVE SECRETARY. Stipends for graduate students in psychology: 1952-1953. *Amer. Psychologist*, 1952, 7, 64-82.
2. EDUCATION AND TRAINING BOARD, AMERICAN PSYCHOLOGICAL ASSOCIATION. Approved doctoral training programs in clinical psychology. *Amer. Psychologist*, 1952, 7, 158.
3. IRWIN, MARY (Ed.). *American universities and colleges*. (6th Ed.) Washington, D. C.: Amer. Council on Educ., 1952.
4. SEARS, ROBERT R. Clinical training facilities: 1947. A report from the Committee on Graduate and Professional Training. *Amer. Psychologist*, 1947, 2, 199-205.
5. SEARS, ROBERT R. Graduate training facilities. I. General information. II. Clinical psychology. *Amer. Psychologist*, 1946, 1, 135-151.
6. Stipends for graduate students in psychology and related fields, 1948-1949. *Amer. Psychologist*, 1948, 3, 20-29.
7. Stipends for graduate students in psychology 1949-50. *Amer. Psychologist*, 1949, 4, 3-16.
8. WOLFLE, HELEN M. Graduate training facilities in psychology: 1951-52. *Amer. Psychologist*, 1951, 6, 3-30.

*Reprints of this article may be obtained from the office of the American Psychological Association for ten cents per copy.*

# NEW ASSOCIATES OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

## APA BOARD OF DIRECTORS

THE Board of Directors announces that the following 1,205 persons were elected Associates of the American Psychological Association as of January 1, 1953. Though not all of them have validated their election by paying their dues, all but a few of them will eventually do so.

Aaronson, Herbert G.  
Ackerman, David  
Adair, Eleanor Reed  
Adams, Edward Byrne  
Adams, James Frederick  
Adamson, John Fuller  
Ader, Saul  
Adornetto, Joseph S.  
Aidel, Ella  
Aines, Andrew A.  
Alexander, William Austin  
Allen, Dean Austin  
Allerhand, Melvin Eugene  
Allison, Roger Blaine, Jr.  
Alprin, Stanley Ira  
Altman, James William  
Altschul, Louis  
Alvarez, Lee Lefcourt  
Ambinder, Walter Jackie  
Anderson, Charles William  
Geeves  
Andreychuk, Theodore  
Anglin, Eleanor Mary  
Antwarg, Alexander  
Armus, Harvard Leonard  
Arnesen, Henrik Schüssler  
Arundel, Eusebius  
Ashby, Jefferson David  
Atkins, Thomas Edward  
Aukes, Lewis Ehme  
Aumack, Frank Lewis  
Austin, Thomas Robert  
Ayers, John Douglas Large

Bachus, John A.  
Backus, Ollie  
Bailey, Clark James  
Bailey, Mattox Augustus  
Baker, Charles Adolphus  
Baldauf, Robert John  
Baldridge, Marie  
Balistreri, James Joseph  
Ballard, Edgar T.  
Bamford, Harold Edward  
Bandura, Albert  
Barasch, Sidney  
Barker, Jack F.  
Barnes, Eugene Hume

Barnes, Katharine Fay  
Baroff, George Stanley  
Barres, Samuel Lawrence  
Barrett, Richard Sears  
Barry, John Joseph, Jr.  
Barthol, Richard Paul  
Basescu, Sabert  
Bassett, Norma Adnee  
Bassham, Robert Allen  
Batt, Harold Vernon  
Batterton, Robert Leslie  
Bauer, Herbert Joseph  
Bauernfeind, Robert Howard  
Beach, David Nelson, III  
Beardslee, David Cromwell  
Beers, Vernon Lee  
Bell, Albert Avery  
Belleville, Richard Edward  
Benjamin, Robert Myles  
Bennett, John, Jr.  
Bennett, Porter  
Bentson, Thomas Gentry  
Berdy, Edwin Martin  
Berg, Wilbert Arthur  
Berger, Seymour Maurice  
Berko, Martin Joseph  
Berkowitz, Howard  
Bernstein, Abraham  
Bernstein, Alvin J.  
Bernstein, Howard B.  
Berres, Frances Brandes  
Bertrand, John Raney  
Beverly, Robert Francis  
Bierbaum, William Baylor  
Bieri, James  
Bieri, Janet Wood  
Binder, Arnold  
Birch, Joseph David  
Bird, Thomas Christopher  
Birney, Robert Charles  
Blackledge, Stanley James  
Blair, Harry Walter  
Blanchard, William Henry  
Blane, Howard Thomas  
Blank, Marjorie K.  
Blatt, Arthur  
Blatt, Sidney Jules  
Blaustein, Florence Leah

Bleke, Robert Charles  
Blumenkrantz, Jack  
Blumenthal, Sophie Bertha  
Bocknek, Gene  
Boger, Jack Holt  
Boice, Mary Lou  
Boland, John Louis  
Bolander, William George  
Bonanno, Justin S.  
Bondel, Gertrude  
Boneau, Charles Alan  
Borland, Loren Ross  
Bowdlear, Charles Milton  
Bowen, John Haynes  
Bower, Philip Adair  
Bowers, Norman Dale  
Boyce, James Edward  
Boyd, William Worth  
Brackin, Walter Hannaum  
Brackmann, John Fred, Jr.  
Bradley, Jack Irving  
Bradley, Joseph Edward  
Bradshaw, Donald Holmes  
Braithwaite, Royden C.  
Bramlette, Carl Allen, Jr.  
Brantly, James Jackson Ivy  
Branzovich, Michael  
Bregman, Martin  
Bricker, Peter Dock, III  
Briggs, George Edward, Jr.  
Brinkmann, Lois L.  
Brochard, John Hunter  
Brody, Harold  
Brody, Zelmor Haber  
Brogno, Frank Paul  
Brown, Charles William  
Brown, Donald Vaughn  
Brown, Edward Lawrence  
Brown, Elizabeth Myers  
Brown, James Adger  
Brown, Natalie Lewinger  
Brown, Roger William  
Brown, William O.  
Bruch, Barbara  
Brutten, Milton Norbert  
Bubeck, Marne F. H.  
Budd, William Claude  
Budnoff, Irving Joseph

Bunin, Sanford  
Burdick, Harvey  
Burdulis, Edward B.  
Burke, John Thomas  
Burns, Leo Joseph  
Burstein, Abraham Isaac  
Burton, Nancy Gaines  
Bush, William Ralph  
Byers, Joanna  
Byrd, Eugene

Cahill, Robert Francis  
Calabria, Frank Michael  
Calvert, John Freeman  
Cambareri, John Dominic  
Campbell, Byron Adams  
Cangiano, Pasquale Louis  
Carey, James Francis, Jr.  
Carini, Louis Peter  
Carleton, Frederick Onias  
Carper, James W.  
Cartee, James Keith  
Casey, John Edward  
Caston, William Frank  
Casucci, James Gerard  
Catalano, Frank Louis  
Chalupsky, Albert Bernard  
Chamberlin, Lorraine Ellen  
Chance, Erika  
Chappell, Tolan L.  
Charnes, George  
Cherry, Charles Noah  
Christal, Raymond Edward  
Christopherson, Victor A.  
Clapp, Chester D.  
Clark, Carl Arthur  
Clark, Rodney Abbott  
Clevan, Walter Arnold  
Cline, Victor Bailey  
Coan, Richard Welton  
Coates, Charles Hunter  
Cobb, Aldrena Beatrix  
Cobrinik, Leonard Herman  
Cocheres, Thomas L.  
Cohen, Herbert  
Cohen, Leon  
Cohen, Lester  
Cohen, Martin



- Cohen, Murray Louis  
 Cohen, Sydney  
 Colbert, John  
 Colbert, Miriam Wax  
 Coleman, Leonard  
 Colgan, Carroll Monroe  
 Collins, Chester Charles  
 Collins, John Joseph  
 Colton, Kathryn Cecelia  
 Comer, Patrick Boyce, Jr.  
 Conklin, Edmund Holbrook  
 Conners, John Edward  
 Cook, Murray  
 Cook, W. Roland  
 Coombs, Robert Warren  
 Coons, Wesley Harrison  
 Corder, Robert Floyd  
 Cornwell, Henry Gilbert  
 Cortes, Carlos Felipe  
 Cottrell, Leonard Slater, Jr.  
 Covatta, Nicholas Daniel  
 Covault, Richard Earl  
 Coyer, Robert A.  
 Craig, Robert Charles  
 Craig, William John  
 Crane, William Joseph  
 Cravens, Richard Baldwin  
 Creager, John Alden  
 Crockett, Walter Hobson  
 Cuadra, Carlos Albert  
 Cumming, William Gordon, Jr.  
 Cumming, William Wallace  
 Cummings, Nicholas Andrew  
 Cureton, Thomas Kirk, Jr.  
 Cutler, Harold Max  
  
 Dai, Bingham  
 Damrin, Dora Elizabeth  
 Daniel, James Patterson  
 Danskin, David Guild  
 Davage, Robert Harvey  
 Davidson, Marjorie Elaine  
 Davis, John Allyn  
 Davis, John Robert  
 Davis, Ralph Edmond  
 Davy, Earl  
 Dean, Charles William  
 Dearmont, Richard Earl  
 Delit, Maurice  
 del Olmo, Francisco B.  
 Del Vecchio, Anthony James  
 DeSousa, Theresa Lorraine  
 Deutsch, Stanley  
 DeVanney, Harry Lester  
 DeVoe, Robert P.  
 Dewey, Richard  
 DiBuono, Eleanor Karasek  
 Dickson, John Thomas  
 Diener, Russell Edward  
 Dieppa, Jorge J.  
 Diers, Wallace Carlton  
  
 Digman, John Murray  
 DiMartino, Angelina Florenza  
 Dingman, Harvey F.  
 Dinwiddle, Frank William  
 Dobalian, Vaughn  
 Doland, Dilman John  
 Dolger, George  
 Dolphin, Jane Elizabeth  
 Doris, Robert E.  
 Dow, Dorothy Dayton  
 Downs, Erich  
 Doyle, William Augustine  
 Drebus, Richard William  
 Dreyer, Albert Stanley  
 Driggs, Don Fehring  
 Drucker, Melvin Bruce  
 Dugan, Genevieve Eleanor  
 Dunlap, Dorothy J.  
 Dunlap, Ralph Livingston  
 Dunlevy, George Patric  
 Dunnette, Marvin Dale  
 Dutcher, Mary Ault  
  
 Earley, Helen Corinne  
 Easley, Glenn Truett  
 Eason, Robert Gaston  
 Eaton, Dorothy Morgenthau  
 Eddins, Edgar Lee  
 Edson, Elizabeth Peterson  
 Efron, Herman Yale  
 Egan, John Mark  
 Einhorn, Harold Lee  
 Elliott, Carl Hartley  
 Engelhart, Max Dissette  
 Engen, Trygg  
 Engram, William Carl  
 Erlandson, Forrest Leroy  
 Esbenschade, Ann Augusta  
 Eskin, Lawrence D.  
 Estroff, Vilma  
 Everson, Richard R.  
 Ewell, Albert Hunter, Jr.  
  
 Fabian, Frederick Ernest  
 Fager, Robert Eugene  
 Fancher, Edwin C.  
 Farber, Nathan  
 Farley, Robert Edward  
 Feffer, Melvin Harold  
 Feldman, Herman  
 Felzer, Stanton Bernard  
 Ferguson, Donald Glenn  
 Fernandez, Elvira Juliana  
 Fierman, Ella Yensen  
 Fikso, Adam  
 Filosa, Mary Grace  
 Fincher, Cameron Lane  
 Findlay, Donald Charles  
 Fine, Harold J.  
 Finkelstein, Melville  
 Finoccio, Dom Vincent  
  
 Fischer, Harvey Jay  
 Fisher, Millard George  
 Fisher, Stanley Herbert  
 Fitzgerald, Bernard Joseph  
 Fitzgerald, Roberta May  
 Fitzpatrick, Richard Stanislaus  
 Flaughner, Ralph Raymond  
 Fletcher, John Lynn  
 Flyer, Eli Stanley  
 Flynn, Estelle Doyle  
 Flynn, James Joseph  
 Foley, Andrew W.  
 Folsom, Willys Ward  
 Ford, Frank Bernard  
 Forrest, Tess  
 Foshee, James G.  
 Fox, Gerald Julian  
 Fox, Jack  
 Francus, Joseph Benjamin  
 Frank, George Hugh  
 Frank, George Paul  
 Frank, Lewis B.  
 Franklin, Lois Elaine  
 Franks, Violet Greenberg  
 Freas, Howard Jacob, Jr.  
 Freer, James Joseph  
 Fregly, Alfred Romeo  
 Freitag, Melvin H.  
 French, Anne Couch  
 Fretwell, Mary  
 Frick, Willard Blair  
 Fricke, Benno Gerry  
 Friedman, Alfred S.  
 Frisch, Paul  
 Froehlich, Abraham  
 Frost, Laurence Leonard  
 Froyd, James Russell  
 Fulcher, Robert Clinton, Jr.  
 Fuller, John Langworthy  
 Funk, Martin Albert  
  
 Ganzhorn, Betty Jane  
 Garcia, Jorge  
 Gardiner, Jean S.  
 Gardner, Malcolm Legrande  
 Gardon, Richard Andrew  
 Garfunkel, Charlotte B.  
 Gargiulo, Armando  
 Garman, Glen Dale  
 Garwood, Victor P.  
 Gavurin, Edward I.  
 Gebel, Arnold S.  
 Germain, George L.  
 Gershoff, Marjorie L.  
 Getz, Steven  
 Giangrande, Salvatore Charles  
 Gibby, Mabel Kuncze  
 Gibson, Barbara Jeanne  
 Gibson, Robert L.  
 Gilberstadt, Harold  
 Ginott, Haim Ginsburg  
  
 Ginsburg, Sol Wiener  
 Gitlin, Sidney  
 Glasscock, Edwin Moore  
 Glazer, Stanford Howard  
 Glickert, Robert Winslow  
 Gloye, Eugene Ernest  
 Gochman, Stanley I.  
 Gold, Glenn S.  
 Golden, Daniel  
 Goldfarb, Allan  
 Goldsmith, Alice Long  
 Goldsmith, Harry  
 Goldstein, Irving Morton  
 Goldstein, Mymon  
 Golub, Arnold Jason  
 Good, Jeanne Ermel  
 Goode, Maxim  
 Goodenough, Donald Robert  
 Goodstein, Martin S.  
 Gordon, Bruce Ronald  
 Gordon, Edward Martin  
 Gordon, Oakley Junior  
 Gowan, John Curtis  
 Grace, N. Burton  
 Graebner, Oliver Edwin  
 Graetz, Robert Edward, Jr.  
 Graham, Milton Duke  
 Grams, Armin  
 Grant, Lestina Marguerite  
 Gravitz, Melvin A.  
 Green, Dorothy Eunice  
 Green, Edward J.  
 Green, Ruth R.  
 Greenbaum, Marvin  
 Greenberg, Albert  
 Greenberg, Arthur L.  
 Greenberg, Irvin  
 Greenwald, Harold Jonathan  
 Gresock, Clement James  
 Griffiths, Jack Stewart  
 Gruber, Joseph  
 Guastella, Martha Jane  
 Guess, Leverett Leroy  
 Gunn, Robert Leroy  
 Gurel, Lee  
 Gurr, Muriel N.  
 Gustafson, Levarl Merle  
 Guyer, Earl Guilford  
  
 Haas, Janet Allyn  
 Haas, Sister Mary Aquinas,  
 SCL  
 Haase, William  
 Haber, William B.  
 Hafner, James Lewis  
 Hagin, Rosa A.  
 Hagin, William Van  
 Hahn, Hans  
 Hahn, Jack  
 Halpin, Thomas Joseph  
 Halpin, Virginia Gould

- Hamilton, Suzanne  
 Hand, Jack  
 Handlon, Joseph Harold  
 Hannum, Thomas Edward  
 Hansch, Francis Noel  
 Hansen, Minna Magdalena  
 Hao, Peter Te Yuan  
 Harding, Francis David, Jr.  
 Harriman, Arthur Ernest  
 Harrington, Gordon Mackenzie  
 Harrington, Robert Willard  
 Harris, Frances Haven  
 Harris, James L.  
 Harris, Richard Howard  
 Hartley, David Sidwell  
 Hartmann, Walter  
 Harvey, O. J.  
 Hasler, Kermit Ralph  
 Hausler, Colleen J.  
 Hawkins, William A.  
 Hayes, George Warren  
 Haykin, Martin D.  
 Hayne, Melvin Lee  
 Healey, Robert E.  
 Heath, Douglas Hamilton  
 Heckelman, Rodamon Gilbert  
 Heim, Richard Barron  
 Heimann, Robert A.  
 Heineman, Charles Edward  
 Heinemann, Eric Gustav  
 Henderson, Florence Margaret  
 Henderson, Gordon H.  
 Hensley, Iven Howe  
 Heron, Alastair  
 Herring, Fred Henry  
 Herrmann, Robert Stott  
 Hershkowitz, Aaron  
 Hewitt, Benjamin Attmore  
 Hickey, Albert Edmund, Jr.  
 Hicks, Leslie Hubert, Jr.  
 Hilliard, George Edwin  
 Hines, Ruth Frances  
 Hobbs, Marjorie Monroe  
 Hocker, Margaret Wingard  
 Hoffman, Barbara Ann  
 Hoffman, Robert Lee  
 Hogue, Henry William  
 Holbrook, Jack Denton  
 Hollon, Thomas Harry  
 Holt, Howard Oliver  
 Honig, Alice Sterling  
 Hook, Marion Emerson  
 Hoover, Arthur Eugene  
 Horgan, James Francis  
 Horn, Raymond Albert  
 Horowitz, Arnold Elie  
 Horrall, Bernice M.  
 Horton, Gilbert Eugene  
 Horwath, John Frederick  
 Hovell, Frank, Jr.
- Howell, Beatrice  
 Hozier, Ann Quinton  
 Huckaby, Bill Herbert  
 Huffman, Phyllis Elaine  
 Hughes, James B., II  
 Hughes, Robert Bruce  
 Hugo, Francis Goodale  
 Hujsa, Charles J.  
 Hulbert, Slade Frank  
 Hummel, Raymond Charles  
 Hunt, Jacob Tate  
 Hurley, John Francis  
 Hurley, John Richard  
 Hurvich, Dorothea Jameson  
 Hutcheon, James Francis  
 Hutter, Samuel  
 Hutton, Daniel Cogdell  
 Hyman, Dean Emerson  
 Hyman, Ray  
 Ihrig, Howard  
 Imre, Paul  
 Ireland, Fred Harold  
 Irey, Alice Eloise  
 Isaacs, Dale Allen  
 Jack, Ollie C., Jr.  
 Jacobs, Eleanor Alice  
 Jacobs, Samuel Norman  
 Jacobson, Frank N.  
 James, William H.  
 Jamison, John Herbert  
 Jenkins, Herbert Miles  
 Jenkins, Nora Congdon  
 Jennings, Charles Lyle  
 Jensen, Bonnie Egeland  
 Jenson, Paul Gerhard  
 Jervis, Frederick Martin  
 John, Eve Spiro  
 Johnson, Cecil Davis  
 Johnson, Laverne C.  
 Johnson, Lennart Charles  
 Johnson, Thomas Gordon  
 Johnston, Elizabeth Graham  
 Johnston, Ralph Irving Augustine  
 Jones, Charles A.  
 Jones, Francis Ewing  
 Jorve, Warren Russel  
 Joseph, Jacob J.  
 Joyce, James Neal  
 Judd, Jerome M.  
 Judy, Chester Jack  
 Kadis, Asya L.  
 Kaestner, Noel Frank  
 Kagan, Jerry  
 Kahane, Murray  
 Kalis, Betty Lee  
 Kalish, Harry Isadore  
 Kallejian, Verne Joseph
- Kaminska, Richard Carl  
 Kandik, Alfred  
 Kanous, Lawrence Ellis  
 Kantrowitz, Gerald  
 Kantrowitz, Theodore  
 Kapotas, Charles Nicholas  
 Kapoun, Jeanne Poslusny  
 Karroll, Joseph Elliot  
 Katz, Florine K.  
 Kaufman, Natalie B.  
 Kaufman, Paul  
 Kaye, Howard Alan  
 Kazienko, Louis Walter  
 Keller, Ralph Waldo  
 Kemp, Charles Frederick  
 Kent, Howard R.  
 Kenyon, Eunice L.  
 Kerber, Harold Eugene  
 Kernan, John Paul  
 Kesner, Lawrence Stewart  
 Kessen, William  
 Kessler, Betty Razor  
 Kessler, Charles Richards  
 Kessler, Sydney  
 Kingston, Albert James, Jr.  
 Kipnis, David  
 Kirchner, Wayne Kermit  
 Kirk, Robert Bruce  
 Kish, George Bela  
 Klein, Lilli Margot  
 Kleinbaum, Joseph  
 Kleinfeld, Alfred  
 Kleinman, Bernard  
 Kleinman, Joseph  
 Klieger, Walter Aaron  
 Klingelhofer, Edwin Lewis  
 Knoell, Dorothy Marie  
 Kokjer, Ruth Wilson  
 Korb, L. David  
 Kosmerl, Alice F.  
 Kostick, Max Martin  
 Kramer, Abe Sidney  
 Krantz, Gordon Christian  
 Krause, Allen Herbert  
 Krieger, Howard Paul  
 Kristofferson, Alfred Boyd  
 Kropp, Russell Paul  
 Kubany, Albert Jules  
 Kumnick, Lillian S.  
 Kupferman, Saul Charles  
 Kushner, Malcolm  
 LaBerge, David Lee  
 Laidlaw, Robert Gordon Nicholas  
 Lamke, Tom Arthur  
 Lanagan, Robert James  
 Lane, Ellen Amster  
 LaPorte, Harold Roy, Jr.  
 Larsen, Reed Mathews
- Lasoff, Benjamin  
 Laties, Victor Gregory  
 Latreille, Frederick Gerard  
 Lauderdale, Thomas Wilson, Jr.  
 Laurence, Mary Wright  
 Laux, Elizabeth Hamilton  
 Laux, Richard Gregg  
 Lavender, H. Jerry  
 Lawlor, William Gerard  
 Lawrence, William Charles  
 Lawrenson, Thomas Joseph  
 Lawton, Mortimer Powell  
 Layne, Eric  
 LeBoit, Joseph  
 Lee, Alfred McClung  
 Lee, Gilbert Brooks  
 Lee, Marilyn Cairns  
 Lee, Robert Sanford  
 Leedy, Herbert Barton  
 Lemeshow, Seymour  
 Lenzycki, Henry Paul  
 Lepore, Albert Ralph  
 Levine, Seymour  
 Levinger, George Klaus  
 Levinson, Billy  
 Levitt, Morton  
 Levy, Leo  
 Levy, Leon Harris  
 Levy, Seymour Paul  
 Lewis, Dorothy Grace  
 Lewis, Hadley McCoy  
 Lewis, Robert Turner  
 Librach, Stephanie Justyna  
 Lichtenberg, Philip  
 Lichtenstein, Irving Caleb  
 Lilly, Paul Joseph  
 Lincoln, Robert Stanley  
 Littell, William McKay  
 Livingston, Charles David  
 Livingston, Goodhue, III  
 Lockman, Robert Frank  
 Lodge, William J.  
 Loeffler, Frank Joseph  
 Lofchie, Stanley  
 Long, Robert Francis  
 Lopategui, Miguelina N.  
 Lopez-Ibor, Juan J.  
 Lothridge, Charles David  
 Lovell, Charles Schuyler  
 Low, Lillian  
 Luke, Walter S.  
 Lund, Duane Richard  
 Lundy, Richard M.  
 Lupfer, Barbara Ann  
 Luria, Saul Martin  
 Lybrand, William Allen  
 Lykken, David T.  
 Lynch, Ruth  
 Lyons, Joseph

- Maass, Richard Conrad  
 MacCaslin, Eugene Frederic  
 MacDonald, Malcolm Douglas  
 MacKay, William Robert  
 Mackey, Woodrow Wilson  
 Madciff, Emma Isabelle  
 Madden, Howard Lavelle  
 Magee, Katharine Joan  
 Magrath, Dorothy Ruth  
 Mahrer, Alvin Raymond  
 Main, Jane Lockwood  
 Mainord, Florence R.  
 Mainord, Willard A.  
 Malfetti, James Luke  
 Mally, George Arthur  
 Mandeville, Paul Frederick  
 Mandl, Billie Sue  
 Mangelsdorf, John Ellis  
 Mankin, Victor Justus  
 Mann, Lester  
 Mantay, Marilyn M.  
 Marks, Malcolm Joseph  
 Marley, Francis William  
 Marshall, Max L.  
 Martin, Nancy McCurdy  
 Marty, Dorothy Mildred  
 Mason, Chaytor Diez  
 Mason, Joseph Matthew  
 Masterman, Louis E.  
 Mateson, Jean Frederick  
 Mathews, Ravenna Wakefield  
 Matthews, Hannah Polster  
 Maxwell, Eleanor Frances  
 May, Werner Theodore  
 Mayans, Frank, Jr.  
 Mayer, Walter Edwin  
 Mayo, Samuel Turberville  
 Mazurek, Bernice Rose  
 McArdle, Dorothy Delia  
     Scholastica  
 McCabe, Frank John  
 McCambridge, Barbara Anne  
 McCavitt, Martin Edward  
 McClure, John Allan  
 McCord, Hallack Hamilton  
 McCornack, Robert L.  
 McDowell, Gloria Mae  
 McElroy, Jack Crow  
 McElvaney, Charles Thomas  
 McGuire, Frederick Lynch  
 McGuire, William James  
 McHale, Julia Lois  
 McHugh, Ann Frances  
 McKillop, Anne Selley  
 McKnelly, Theodore T.  
 McQueen, Robert  
 Meade, Robert Dale  
 Meads, William Jewett  
 Melching, William Howard  
 Meleika, Louis Kamel  
 Melhado, Julian J.  
 Mellett, Thomas Paul  
 Meltzer, Leo  
 Melzack, Ronald  
 Menges, Paul Fillmore  
 Menlo, Allen  
 Messler, Martha Anne  
 Meyer, John Kellogg  
 Meyer, William Jones  
 Meyersburg, Anne  
 Michael, Donald Nelson  
 Michaelson, Franklyn Jack  
 Michon, Zigmond Sagittarius  
 Mick, Roger Marcus  
 Middleton, George, Jr.  
 Milam, James Robert  
 Milholland, John Edgar  
 Miller, Christine Mathews  
 Miller, Gail S.  
 Miller, John Ydstie  
 Miller, Ray A.  
 Miller, Wilfred T.  
 Millon, Theodore  
 Milton, Charles Rudolph  
 Mindess, Harvey  
 Miner, John Burnham  
 Mirsky, Allan Franklin  
 Misch, Robert C.  
 Mishinsky, Jack  
 Mitchell, Charles C.  
 Mitchell, Rebecca O. Nelson  
 Monaco, Arthur Theodore  
 Monderer, Jack H.  
 Montgomery, Betty Broyles  
 Moody, Joan Vogt  
 Morris, Charles Eugene  
 Morris, James B.  
 Morse, William Herbert  
 Morter, LaRoy Joseph  
 Morton, Billie Palmer  
 Mould, Lillian J.  
 Mowry, Harley Warren, III  
 Moyer, James Edward  
 Moylan, Joseph James  
 Mueller-Zbylut, Mirjam  
     Ingeburg  
 Muhlbauer, Anna  
 Muller, Theresa Grace  
 Mullin, Carlos Paine  
 Mullins, Cecil J.  
 Munroe, Henry H.  
 Murawski, Benjamin J.  
 Murphy, John V.  
 Musiker, Harold Robert  
 Myers, Arlo Kenneth  
 Myrick, Richard  
 Nado, Fred John  
 Nagle, Bryant Frutchev  
 Najarian, Michael  
 Narmore, Phyllis May  
 Neimark, Edith D.  
 Nelson, Charles Larue  
 Nelson, Constance B.  
 Neu, Janice Page  
 Neville, Albert Roland  
 Newman, Carl  
 Newman, John Robert  
 Newman, Joseph  
 Newman, Ruth Gallert  
 Newman, Stanley  
 Newmark, Frances Connor  
 Nichols, Robert Cosby  
 Nickeson, Richard Carroll  
 Niebuhr, Herman, Jr.  
 Nierman, Florence Kathryn  
 Nixon, George  
 Noble, Eric  
 Nolan, Carson Young  
 Noll, Esther Gould  
 Noll, John Owen  
 Norris, Howard Jerome  
 North, George E.  
 Northcott, Hollie Bryant  
 Nurse, Alexander Rodney  
 O'Connor, Roderick Francis  
 Oettel, Arnold Max  
 Ogdon, Donald Potter  
 O'Hare, John Joseph  
 Oliver, Kenneth Robb  
 Olsen, Leif Ole  
 Olson, Norman King  
 Olson, Ray Willard  
 Oltean, Mary Marie  
 O'Neill, Harry William  
 Ort, Jeannette Eileen  
 Osterweil, Jerry  
 Ostrander, Edward Robert  
 Ostreicher, Leonard Martin  
 Otte, Richard Brand  
 Overlade, Dan C.  
 Owen, Robert Lee  
 Page, Curtis W.  
 Palmatier, William Andersen  
 Palter, Gerald Harvey  
 Panzer, Basil I.  
 Pappas, Georgia Ann  
 Parker, Donald Henry  
 Parloff, Morris Bernard  
 Parsons, Edward Thomas  
 Pasto, Tarmo Abraham  
 Pastovic, John Joseph  
 Patteson, Richard Francis  
 Pauker, Jerome D.  
 Paull, Donald Myron  
 Paulsen, John Robert  
 Payne, Marshall Brown  
 Pellet, Bernard  
 Perez, Paul Powers  
 Perry, Dallis Kay  
 Perry, Norman Conrad  
 Peterson, Peggy Pottenger  
 Peterson, Donald Robert  
 Peterson, Eleanor Marie  
 Peterson, Norman Dale  
 Peterson, Richard Oscar  
 Peterson, Robert Maurice  
 Peterson, William Charles  
 Pfeffer, Marjorie  
 PHELLEPS, Ralph James  
 Piers, Ellen Virginia  
 Pierson, Rowland Ray  
 Plaut, Thomas Franz Alfred  
 Pletts, Gilbert Oliver  
 Poffenberger, Thomas Millard  
 Polin, Albert Terrence  
 Pollock, George Howard  
 Pollock, William Thomas  
 Popenoe, Edith Palmer  
 Popper, Harry John  
 Porter, Vonne F.  
 Postma, Mary  
 Potter, Ruth E.  
 Potter, Walter Franklin  
 Powell, Frank V.  
 Power, Ann Elizabeth  
 Preston, Caroline Eldredge  
 Price, Helen G.  
 Prilook, Lydia  
 Pritchett, Edwin Earl  
 Rabinovitch, Mortimer Sam  
 Rackley, Lloyd Ernest  
 Racusen, Frances Rhea  
 Rader, Gordon E.  
 Radner, Louis  
 Rahman, James Ernest  
 Ranson, Mary Kathleen  
 Rasmussen, Alex L.  
 Rasmussen, Iris Silliphant  
 Rast, Robert  
 Ray, William Samuel  
 Redlener, Joe  
 Reece, Allan MacDonald  
 Reed, Charles Frederick  
 Reed, Homer Blosser Carey,  
     Jr.  
 Reed, Jeannette Pruyn  
 Reiff, Robert  
 Reisel, Jerome  
 Reiter, Sidney R.  
 Renaud, George Emile  
 Reuben, Howard  
 Reveal, Robert, Jr.  
 Rhodes, James Melvin  
 Rhodes, William C.  
 Riche, Charles Van, Jr.  
 Richey, Harold Winston  
 Rickard, Joseph Conway  
 Ringel, Seymour  
 Riss, Walter  
 Roach, Darrell Eugene



- Robbins, Arthur  
 Robbins, Sidney S.  
 Roberts, Charles Lewis  
 Roberts, Eugene Elbert  
 Robinowitz, Ralph  
 Robinson, Frank Bennett  
 Roby, Thornton Boswell  
 Rochwarg, Herman  
 Rockberger, Harry  
 Rockway, Marty Robert  
 Rodgin, David W.  
 Rodrigues, John Silva  
 Romberger, Roy Walter  
 Rome, Howard S.  
 Rorke, Neal John  
 Rosen, Catherine Elkin  
 Rosenberg, Margery R.  
 Rosenfeld, Irwin Joseph  
 Rosenzweig, Milton I.  
 Rosner, Stanley  
 Ross, David  
 Ross, Roy Weldon  
 Roth, Ammon Clinton, Jr.  
 Roth, Bernard  
 Rothkopf, Ernst Zacharias  
 Rothstein, Hyman  
 Rowan, Thomas Churchill  
 Rowe, William Jennings  
 Rowland, George Edward  
 Roy, Joy Benjamin  
 Rubin, Gerald  
 Rubinstein, Beatrice Ruth  
 Rudel, Rita Gillis  
 Runyon, Eugene Louis  
 Runyon, Richard Porter  
 Russell, George Hugh  
 Russell, James Ward  
 Rutledge, Lester Thomas  
 Ryan, Doris Elizabeth
- Sacarello, Virginia  
 Salman, Raymond Daniel  
 Salpeter, Miriam Mark  
 Sammons, Herbert W., Jr.  
 Sampson, Harold  
 Sampson, Richard T.  
 Sanford, Edwin John  
 Matthew  
 Sartin, James Lewis  
 Saunders, Roger Earle  
 Sawrey, William Lester  
 Schaeffer, Maurice S.  
 Schaffer, Robert E.  
 Scharlock, Donald Peter  
 Scheele, Jean Burgdorf  
 Scheidler, Charles Henry  
 Schell, John S.  
 Schenkel, Kenneth Francis  
 Scherer, Wallace Brown  
 Schillinger, Morton S.  
 Schlosser, John Rolland
- Schmidt, Eleanor Parker  
 Schmidt, Louis G.  
 Schmitter, Earl Godfred  
 Schpoont, Seymour Hirsh  
 Schulman, Jacob  
 Schulman, Joseph Herbert  
 Schutz, Howard Gene  
 Scott, Carl Lee  
 Scott, Jerold David  
 Scott, William Abbott  
 Seaquist, Maurice Raymond  
 Segal, Julius  
 Segel, Harold Jerome  
 Shaffer, Charles Louis  
 Shapiro, David Sidney  
 Shapiro, Esther Winkler  
 Shapiro, Martin Allen  
 Shayne, Theol Joyce  
 Sherman, Lewis Joseph  
 Shevitz, Reuben Nathan  
 Shipman, William Gibson  
 Shore, Milton Frank  
 Showers, Kay Sperry  
 Shriver, Edgar Louis  
 Shrock, John G.  
 Shulman, Harold Seymour  
 Shure, Gerald Hymen  
 Sidney, George Paul  
 Siegel, Saul Marvin  
 Silverberg, Celia Sylvia  
 Silverstein, Arthur Bertram  
 Simmons, David B. W., Sr.  
 Simmons, Robert Francis  
 Simms, Nancy  
 Simon, Maria Dorothea  
 Simon, Walter Benno  
 Simons, Ann Ruth  
 Sims, Neil Barton  
 Singer, Harry  
 Sinnett, Earle Robert  
 Skillman, Joanne Sweeney  
 Slabodkin, Irving  
 Slade, Colin McIntosh  
 Slivinske, Alec Joseph  
 Slockbower, Edward Windsor  
 Slocombe, Edna Elizabeth  
 Small, Kalman  
 Smith, Donald Eugene  
 Smith, James Calvin  
 Smith, James Elwood  
 Smith, Lyman  
 Smith, Myra Jean  
 Smith, Robert Edward  
 Smith, Sidney Layton  
 Smith, Stanley Wallace  
 Smith, Walter Douglas  
 Smock, Charles Denby  
 Snowden, Robert Fort  
 Snyder, Francis Frederick  
 Snyder, Rebecca  
 Solomon, Adrian
- Sone, Robert Thomas  
 Spiegel, Joseph  
 Spiegel, Stanley  
 Spieth, Walter  
 Spitz, Lucille Lesch  
 Spivack, George  
 Sprung, Stanley Robert  
 Stadele, Marjorie Mabel  
 Staley, John D.  
 Stanton, John Michael  
 Staples, Ethel James  
 Starr, Clark Dean  
 Stein, Elisabeth Mays  
 Stein, Jacob J.  
 Steinberg, Leonard  
 Steiner, Ivan Dale  
 Steinert, Richard Maurice  
 Steinschneider, Alfred  
 Stern, Murray Jack  
 Stevenson, Harold William  
 Stone, David Ray  
 Stone, Edmund Cyril  
 Stone, Freda Beth  
 Stone, George Chester  
 Stone, John Truman  
 Stott, Richard Lavon  
 Strachan, Robert Edward  
 Strain, Edward Richard, Jr.  
 Strange, Frank Bolin  
 Struck, Richard Daniel  
 Suci, George John  
 Summers, Linden Dulaney, Jr.  
 Summo, Anthony J.  
 Sumner, Earl D.  
 Sunde, John Alfred  
 Sussel, Lora  
 Sutter, Everett Lee  
 Svenson, Donald Wright  
 Swan, Robert Junior  
 Swanson, Charles Edmund  
 Swanson, Robert A.
- Taaffe, Gordon  
 Tabor, Anthony B.  
 Taibl, Raymond Martin  
 Tamkin, Arthur S.  
 Taranto, Americo  
 Tarvin, John Cogle  
 Tasso, Charles Anthony  
 Tatom, Mary Helen  
 Tatz, Sherman Joseph  
 Taub, Daniel Victor  
 Tauger, Herbert  
 Taylor, Jean Grove  
 Taylor, Vivian Decker  
 Teitel, Stanley  
 Temerlin, Maurice Kahn  
 Terry, James Hunter  
 Tesseneer, Ralph A., Jr.  
 Thaves, Robert Lee  
 Thayer, Clarence Richmond
- Thomas, Brother Claver  
 Thomas, Robert Murray  
 Thompson, F. Fagan  
 Thomson, Louise G.  
 Thorne, Russel L.  
 Thurston, John Ross  
 Tieger, Murray Emanuel  
 Tiemann, Robert Sisson  
 Tillery, Harry Dale  
 Tollefson, Arthur Leroy  
 Tondow, Murray  
 Toorenaar, Gerard J.  
 Torr, Donald Vernon  
 Torroella Gonzalez Mora, Gustavo  
 Townsend, Agatha  
 Trabold, Frederick William  
 Trachtman, Gilbert Marvin  
 Treesh, Edward Oron  
 Trelub, Arnold  
 Tremaine, Donahue Leon  
 Trinkaus, William Krueger  
 Trione, Verdun  
 Trovillo, Paul Vincent  
 Tseng, Sing Chu  
 Tydlaska, Mary Ann
- Ulrich, Charles Monroe  
 Vail, Carleton McCulloch  
 Vana, Alice Otilie  
 Van Fleet, Farmer D.  
 Vayda, Kenneth Gerald  
 Verdicchio, Frank Gerald  
 Vermillion, Mary E.  
 Vigliano, Aldo  
 Vogt, David James  
 Voiers, William Dawson  
 Volle, Frank Oliver
- Wadsworth, Mary Vicars  
 Wagner, Martin  
 Wahlstedt, Betty  
 Wait, Gale Pepper  
 Wald, Charles  
 Wald, Robert Martin  
 Walder, Leopold Oscar  
 Walker, Donald Everett  
 Walker, Francis Charles  
 Walker, Gardner Browning  
 Walker, Richard Norris  
 Walker, William Brewster  
 Walter, Lowell McNees  
 Ward, Joe Henry, Jr.  
 Ward, Virgil Scott  
 Ware, Kenneth E.  
 Warner, Joseph David  
 Warner, William Scott  
 Warren, John Michael  
 Warshaw, Leon  
 Wascoe, Daniel F.

Waskowitz, Charlotte Hedwiz	Whitesel, John Asbury	Willis, Marlan Paul	Vocom, Ralph Linwood
Waterhouse, Ian Kellie	Whiting, Joseph Frank	Wilner, Milton	Young, Albert Thomas, Jr.
Waters, Harry Junior	Whitlam, Marjorie M.	Wilson, John Carroll	Youniss, Richard Paul
Weatherhead, Sidney Warren	Whitman, Evelyn Busch	Winer, Harold Robert	Yudelowitz, Irving S.
Wechsler, Ruth Reiser	Whittaker, James Oliver	Wisotsky, Morris	
Weinick, Howard Milton	Whittenburg, John Allen	Wittert, Edward Mayer	
Weintraub, Irwin George	Whitton, Carl Thomas	Wittich, John Jacob	Zabarenko, Lucy Braider
Weiss, Henry H.	Wiefels, Frank Leonard	Wolf, Alvin	Zamansky, Harold Seymour
Welkowitz, Joan H.	Wiens, Arthur N.	Wolfson, William	Zebell, Chester Ralph
Wells, Richard Gillis	Wiggins, Jack Gillmore, Jr.	Wollaege, Frederick Robert	Zeleny, Charles Ellingson
Wells, William DeWitt	Wilbanks, William Allen	Womer, Frank Burton	Zeleny, Marjorie Pfeiffer
Welsh, George Byron	Wilcox, Elba Jack	Woodbury, Charles Augustus, Jr.	Zeligs, Rose
Wenar, Charles	Wilcox, George Tavender	Woolman, Myron	Zimmerman, Henry George
Wenig, Phillip Wayne	Wilkins, James Ward, Jr.	Wright, William Thomas, Jr.	Zimrot, Efraim S.
Werner, Donald Sebastian	Williams, Douglas Freeman	Wulff, John Jepson	Zolik, Edwin Stanislaus
Westen, Norma P.	Williams, Harold Leroy	Yates, J. W.	Zucker, Karl Bruce
Westhafer, Francis LaVergne	Williams, Milton Hugh, Jr.	Yeya, Teruko	Zuckerman, Marvin
Wheeler, John Ingraham, Jr.	Williams, Robert John		Zweibelson, Irving
White, Robert Thomas			

---

## Comment

---

### The Interest in the Practice of Psychotherapy

In looking through the 1951 APA Directory, I was struck by the frequent mention of a special interest in some aspect of psychotherapy. It seemed to me that this situation was very different from what it would have been a number of years ago. It occurred to me that in this listing of major interests in psychology, as given in an unstructured way by each APA member, we might have a useful tool for investigating the extent of interest in this relatively new field. Perhaps we could even discover something about the changes which are taking place over the years in the degree to which psychologists are finding major personal involvement in this field.

With this thought in mind, an analysis was made of a sizable sampling of both the 1948 and 1951 APA Directories.<sup>1</sup> The purpose of this article is to report the results of this analysis.

**Method.** For both the 1948 and 1951 APA Directories, each psychologist was given the opportunity to list, in his own terms, his major field or fields of interest in psychology. This is given at the conclusion of each biographical sketch, and characteristically includes from one to four areas of special interest. It is this statement which was used in making the analysis to be reported.

An attempt was made to sort out those items in this listing of interests which indicated a major interest in some aspects of the *practice* of psychotherapy, since this is an area which has given the profession much concern. Thus, such listings as "treatment techniques in child therapy," "parent counseling," "counseling with college students" were included in the group categorized as interested in the practice of psychotherapy. Where the phrase was very general, such as "child guidance," or "interviewing," the psychologist was categorized as not having a special interest in psychotherapy, since such interest was not clearly indicated, though it might, of course, be present. Also excluded were listings which seemed to imply only a research or armchair interest in psychotherapy such as "application of learning theory to psychotherapy," "techniques of assessing therapeutic methods" and the like. Undoubtedly some of these individuals are concerned with the practice of psychotherapy, but since this interest was not specifically stated, they were excluded. The full list of statements included, and the peripheral statements excluded are given below, in order to be of assistance in understanding the findings.

<sup>1</sup> Mr. Richard Farson assisted in this study.

**Categories.** Psychologists who gave one of the following as a statement of one of their major interests, were categorized as having an interest in the practice of psychotherapy:

analytic group therapy; adjustment counseling; child therapy; client-centered therapy; clinical therapy; college counseling; counseling; counseling practices; counseling procedures; counseling process; counseling techniques; counseling the physically and mentally handicapped; counseling tools and techniques; counseling with college students; diagnosis and treatment of problem children; employee counseling in industry; group therapy; group therapy for children; hypnotherapy; individual therapy; marriage consultation; marriage counseling; nondirective technique; parent counseling; play therapy; psychoanalytic psychotherapy; psychoanalysis; psychiatry (counseling); psychodrama; psychotherapy; psychotherapy methods; psychotherapeutic techniques; psychotherapeutic techniques for dealing with problem personalities; student counseling; techniques of general clinical counseling; techniques in psychotherapy and guidance; therapeutic systems; therapeutic techniques; therapy; treatment methods; treatment of psychoneuroses; treatment techniques in child therapy.

The judgment was made that psychologists had *not* indicated a specific interest in the practice of psychotherapy when they listed such items as these among their major interests:

application of learning theory to psychotherapy; basis of therapeutic improvement; child guidance; clinical interview; development of therapeutic techniques; educational counseling; evaluation of counseling; evaluation of group psychotherapeutic techniques; evaluation of psychotherapy; experimental studies in psychotherapy; guidance; hypnosis; interests and character of counselors; interviewing; interviews; mental hygiene; personality changes in psychotherapy; remedial work; research and methods in psychotherapy; research in psychotherapy; techniques of assessing therapeutic methods; vocational counseling; vocational counseling techniques.

All other major interests given were judged as not indicating a specific interest in the practice of psychotherapy.

As will be seen from the figures that follow, nearly 26% of the psychologists fail to give the information which would form the basis of categorization. A large number of these give no biographical information, and the others give the biographical information but do not list their special interests. There is no way of knowing whether the lack of data on one-fourth of the group biases the findings. This group may be randomly distributed or there may be selective factors at work.



TABLE 1

*Psychologists showing interest in psychotherapy*

	1948		1951	
	No.	%	No.	%
Interested in practice of psychotherapy	88	23.5%	236	28.3%
Not interested	286	76.5%	597	71.7%
Total giving information	374	100%	833	100%
No information available	116		304	
Total sample	490		1137	

*Sampling.* A sample of approximately 500 was first obtained by taking all the psychologists on every tenth page in the 1948 Directory. A similar sample was obtained by taking every 15th page (page 1, 15, 30, etc.) in the 1951 Directory. When it appeared that there might be value in studying subdivisions of the 1951 sample this group was doubled (by taking pp. 8, 23, 38, etc.).

*Findings.* The findings are presented in three tables. Table 1 indicates that of those stating their fields of interest in psychology 23.5% of the 1948 group and 28.3% of the 1951 group expressed as of major concern to them some phase of the practice of psychotherapy.

In Table 2 the material from the 1951 sample is broken down in terms of the age of the psychologist. There appears to be a clear though slightly irregular trend for the interest in psychotherapy to be definitely more frequent among the younger members, with approximately one-third of all those members born since 1915 having a major interest in the practice of psychotherapy.

It is, of course, of interest to know the total number of psychologists in the APA having this major interest, and Table 3 provides an estimate. This estimate is tentative for two reasons. For 1948 and 1951 it is the number which is predicted by our respective samples,

TABLE 2

*Changing expression of interest in psychotherapy with age (Omitting those who gave no information)*

Birth Date	Interest	No Interest	% Showing Interest	% Showing No Interest
Prior to 1895	8	48	14.3	85.7
1895-1899	11	34	24.4	75.6
1900-1904	16	59	21.3	78.7
1905-1909	23	76	23.2	76.8
1910-1914	46	103	30.9	69.1
1915-1919	56	106	34.6	65.4
1920-1924	61	133	31.4	68.6
1925-1929	14	26	35.0	65.0

but is not based on the analysis of the whole membership. The total membership as of January, 1952 is also given and an estimate of the interested group is made, using the percentage gained from the 1951 sample. The data from Tables 1 and 2 indicate that the percentage would in all probability be higher in 1952, and this estimate is therefore to be taken as a minimum figure.

The figures in Table 3 are somewhat surprising since they bring together two strong trends—the rapid growth of the number of all psychologists, and the increasing number of psychologists interested in the practice of psychotherapy. Hence we discover that in the four-year period from 1948 to 1952 the number of APA members with a major interest in psychotherapy increased from less than 1,200 to more than 2,800, this being a conservative estimate. This latter figure is more than twice as large as any existing division of the APA.

TABLE 3

*Total membership showing interest (As predicted by sample)*

	1948	1951	1952
Total membership	5047	8554	9950
% of sample showing interest in psychotherapy	23.5%	28.3%	28.3%*
Total number interested in psychotherapy	1186	2421	2816

\* Using percentage derived from 1951 yearbook, which is possibly too low to represent the true picture in 1952.

*The implications of the findings.* We may conclude from the above that two out of seven APA members have, as one of their fields of special interest in psychology, some phase of the practice of psychotherapy as operationally defined in this study.

We may also conclude that among the members born since 1915 (who constitute nearly half of the membership) one out of three has an interest in the practice of psychotherapy.

What general meanings do these facts seem to have? Certain possibilities may be suggested.

In the first place it is clear that this interest cuts across a number of different divisions in the APA. One wonders whether any other general interest, such as interest in tests and measurements, in learning theory, or in perception would be any more pervasive in cutting across divisional lines. It would seem to mean that an interest in the broad area of psychotherapy—the alteration of human behavior through interpersonal relationships—may well become a powerful influence for integration and unity among psychologists working in different fields.

It also appears likely that with one-third of the younger members of the profession interested in this

field, an increasing number of hypotheses, theories, and researches will grow out of the work of those who are dealing with the dynamics of personality in a close interpersonal relationship.

The findings which have been given also suggest the answers to several questions which have been perplexing both psychologists and members of related professions. Let us look at three of these.

1. Will psychologists carry on the practice of psychotherapy as part of their general professional enterprise? The prospect that the profession might not carry on an activity which is a major interest of one-third of its younger members, is unthinkable.

2. Will psychologists be able to obtain adequate training in psychotherapy? When more than one-fourth of the total profession are interested in a field of endeavor, and this interest is even stronger among the younger members, the question as to whether adequate training will be provided is largely academic. Adequate preparation may be slow in coming, or it may not; the steps in the direction of providing it may prove very difficult or may not; but when the interest is so great the ultimate answer is positive, and the only question is one of time. Sooner or later the basic courses, the practicum experience, the supervised internships, will be provided. And, in spite of the usual cultural lag, it is probably only a matter of time until psychology journals and texts give a reasonable proportion of their space to this field. The adequacy of training will almost certainly grow with the increasing adequacy and depth of experience in psychotherapy.

3. Will training in psychotherapy be provided primarily at the postdoctoral level, as was suggested at the Boulder conference? I believe these facts make it highly unlikely. Faculty members teach those things in which they have an interest, and as present faculty members are replaced by younger men, it is clear that many of them will be teaching some phase of counseling or psychotherapy to their predoctoral students. The same forces will operate among students. The prospect that one-third (or possibly more) of the students will put off learning one of the fields in which they have a major interest until after they have completed their formal professional training is most unlikely. What the timing may be, it is very difficult to predict. The simple facts from the Directory indicate however one of the directions in which the profession is moving, and our predoctoral professional preparation will in time reflect this trend.

There are other implications in this material which the reader is at liberty to develop for himself. One concluding comment might be made. The growing interest in psychotherapy among psychologists has often been pointed to with alarm, by individuals inside and outside the profession. But if for a moment we lay

aside the natural resistance of a professional group to any sort of change, and if we also disregard for the moment the difficult, but certainly temporary, problems of interprofessional relationship which are created by this trend, what remains? There seems to be basically one element of lasting significance for the science and profession of psychology. It is that psychologists will develop their hunches, their theories, their concepts, their research projects, not only from knowledge of animals and laboratory subjects, but from intimate contact with the psychological dynamics of individual human beings in a process of change. One can only ask with the man in the street, "Is this bad?"

CARL R. ROGERS

*University of Chicago*

### Analysis of Industrial Psychology Courses

Sometime ago I made an analysis of the graduate courses in psychology in 65 colleges that offer the doctorate in psychology. I thought it would be interesting and valuable to apply the results of my study to the 32 colleges that claim to give "reasonably complete" graduate training for the doctorate in industrial psychology as reported by Helen M. Wolfe in the January, 1951, issue of the *American Psychologist*. My main objective was to compare the course offering of these 32 colleges with the median course offering of all of the 65 colleges. Unfortunately, my original study did not include Carnegie Institute of Technology and Illinois Institute of Technology; so this study is limited to only 30 of the 32 colleges.

In my original study, I assumed that a college offering the doctorate in industrial psychology should give adequate training in five areas—industrial, statistics, psychometrics, research methodology, and guidance. This assumption was made mainly upon my own experience as an industrial psychologist in industry and government. It has been my experience that industry expects the industrial psychologist to have specific knowledge of such personnel procedures as job analysis and evaluation, interviewing procedures, merit rating, employee attitude surveys, etc. in addition to having an adequate background in basic psychology. Also the industrial psychologist is usually looked upon as the top personnel research man in his company and, therefore, should know how to design and plan his research and should know how to apply the appropriate statistical techniques to his data.

For the purposes of the present study I dropped the guidance area. Table 1 shows the results of my study. Column 7 of this table is probably the most informative in that it shows the total number of semester credits offered in 1950-1951 in the four areas—industrial psychology, statistics, psychometrics, and research meth-

TABLE 1

*Course offerings in thirty colleges in which "reasonably complete" graduate training in industrial psychology was offered for the doctorate*

Institution	Industrial*		Statistics	Psycho-metrics**	Research Meth.	Total, Cols. 2-4	23 Basic Courses	Ratings on Total Course Offerings	
	Sem. Hrs.‡	Rank Order in Indus.	Sem. Hrs.	Sem. Hrs.	Sem. Hrs.	Sem. Hrs.		Sem. Hrs.	Rank Order
1. Western Reserve U.	33	4.5	6	27†	9	75	45	44	2.5
2. Michigan, U. of	23	7	8	27	13	71	78	48	1
3. Penn. State Coll.	38	1	6	25	1	70	60	42	6
4. Maryland, U. of	33	4.5	9	27	—	69	51	39	10
5. Purdue U.	37	2	15	12	4	68	47	43	4
6. California, U. of (Los Angeles)	34	3	—	25	5	64	90	44	2.5
7. Washington U. (St. Louis)	18	14.5	14	21	—	53	84	38	11.5
8. Washington U. (Seattle)	22	8	11	17	3	53	70	42	6
9. California, U. of (Berkeley)	20	10.5	—	22	10	52	89	40	9
10. New York U.	30	6	6	15	—	51	75	36	15
11. Ohio State U.	21	9	16	10	3	50	85	41	8
12. Houston, U. of	9	27	6	27†	6	48	61	36	15
13. Iowa, State U. of	14	21	19	13	2	48	71	37	13
14. Northwestern	18	14.5	9	18	3	48	49	36	15
15. Southern Cal., U. of	14	21	7	24	3	48	36	33	18
16. Wisconsin, U. of	20	10.5	9	14	3	43	100	42	6
17. Tulane U.	18	14.5	9	12‡	3	42	84	38	11.5
18. Utah, U. of	15	18.5	9	15	3	42	59	35	17
19. N. Carolina, U. of	10	26	10	20	—	40	67	31	22
20. Stanford U.	19	12	6	13	2	40	52	32	20
21. Illinois, U. of	18	14.5	3	15	—	36	50	26	27.5
22. Kansas, U. of	12	24.5	3	18‡	3	36	70	32	20
23. Penn., U. of	13	23	8	14	4	33	42	32	20
24. Louisiana State U.	12	24.5	6	9†	—	27	57	24	29
25. Rochester, U. of	6	29	6	9	6	27	66	30	24
26. Syracuse U.	15	18.5	3	6†	3	27	72	30	24
27. Minnesota, U. of	14	21	1	10	1	26	63	26	27.5
28. Columbia U.	6	29	3	6	6	21	84	29	26
29. Cornell U.	16	17	6	6	3	17	60	30	24
30. Johns Hopkins U.	6	29	4	3†	—	13	66	20	30
Medians¶	12		6	15	3	36	60	31	

\* Doctoral and master's in industrial training offered by all 30 colleges.

\*\* Doctoral and master's training in psychometrics offered unless entry is marked † or ‡.

† Master's training only.

‡ No information about degrees.

§ All quarter-hour courses reduced to equivalent semester hours.

¶ Medians based on distribution of courses in 65 PhD-granting institutions.

odology. The colleges are arranged in the order of the semester credits found in this column. It was found that 22 or 73.3 per cent of the 30 colleges are at median or better with respect to their combined offering in these four areas when compared with the course offering in these four areas of the total number of 65 colleges. Column 2 of the table shows that 25 or 83.3 per cent of the colleges give median or better offering in industrial psychology. Column 4 indicates that 22 or 73.3 per cent give median or better training in statistics. Column 5 indicates that 16 or 56.3 per cent offer

median or better training in psychometrics. Column 6 shows that 19 or 63.3 per cent are median or better in their offering in formal research methods courses. Column 8 shows how these 30 colleges rate in their offering in 23 subcategories of basic courses. It can be observed that 20 or 66.67 per cent give median or better training in this area. Finally, Column 9 shows that 22 or 73.3 per cent are at median or better on their total course offering.

In my original study, I rated all of the 65 colleges on their course offering in five areas, namely, basic, indus-



trial, statistics, psychometrics, and research methodology. I rated each of the five areas, except industrial psychology, on a 10-point scale. Industrial psychology was rated on a 20-point scale. The scale points on each scale were derived from the percentile distribution of the semester points in each area. For example, the industrial course offering of each of the 65 colleges was rated on a 20-point scale in which the 85th percentile of the industrial course distribution was assigned sixteen points, the 65th twelve points, the 50th ten points, the 35th eight points, and the 15th percentile four points. The total rating for each college was obtained by adding the five ratings for the five areas. These total ratings for the 30 colleges that claim "reasonably complete" program for the doctorate in industrial psychology are listed in Column 9 of the table.

I would recommend that anyone interested in the graduate training facilities of a college for the doctorate in industrial psychology should especially consult Columns 6 and 8 of the table.

It seems to me that it would be safe to draw one conclusion from these data, namely, that a great majority of the 30 colleges whose chairmen consider their program as "reasonably complete" for doctoral training in industrial psychology have better than average course offerings in the industrial, statistics, psychometrics, research methodology, and basic psychology areas.

ADAM PORUBEN, JR.  
New York, N. Y.

#### Necessity for Publicly Supported Psychological Clinics

With reference to the problem of fees for psychologists in private practice, the experience of a college psychological clinic in a small community may point up a few factors.

Our bureau, in addition to its regular responsibilities to the parent institution, sees about 100 cases from the community each year. A typical case is that of a ten-year-old girl who was referred by a local MD. He had examined her, for a fee of approximately thirty dollars, and could find nothing physically wrong. In the college clinic she was given the Stanford-Binet, a cursory Rorschach, selected TAT cards, the MAPS test, and the Blacky test. Diagnosis was made, a parents' conference was held, and a report was sent to the physician.

A conservative estimate of the fees for such service by a private clinician would range from seventy-five to one hundred dollars. The services cost the girl's parents nothing, and cost the college about forty dollars in salaries for the student-psychometrist and the psychologist in charge. While the girl's parents might have been able to pay the actual cost to the college, they

certainly could not have managed the full fee a private psychologist must necessarily charge for such service.

It has been estimated that the psychological services of this college bureau could be increased 500 per cent if time and funds were available. Certainly, this points to the necessity for publicly supported, or partially supported, psychological clinics rather than the unavoidably high-priced private clinician.

ALEXANDER MILTON  
Bureau of Research  
Western Washington College

#### Psychologist, Know Thyself!

The provocative and altogether delightful informal essay on the sociology of psychology by the Executive Secretary (*Amer. Psychologist*, 1952, 7, 83-85) testifies to a widely felt need among American psychologists to rediscover their own field. The profession seems to be a bit dazzled by its successive bursts of quantitative growth during the past decade, but this quantitative phenomenon is only a by-product. The real source of the need to rediscover psychology is the increasing demand for psychological services by ever-growing governmental and other public enterprises which seem to be operating under the oddly mated slogans of "total human welfare" and "total military efficiency." Dr. Sanford's contention that the probable lines of further professional development should be charted with reference to the amoeba-like entity or Lewinische field of our total social order seems eminently sensible, but two or three questions, chiefly semantical in character, do come to mind.

In one sense, any organized body of scientists is just a part of the total social field. But in another sense the true homeland of the truth-seeker is only that actuality which he encounters. However much perceptions are socially determined (and I am sure that the degree is a great one), we must recognize that, through the actual encounters of science with its cosmos, social ideas and personal perceptual sets are also changed. First of all, however, privately personal ideas are changed, and no less by aesthetic than by scientific encounters. The functional significance of personal world-views, it seems to me, is that each individual who is ideationally motivated by such a world-view thereby transcends, behaviorally, his membership-character within the secular social order. In other words, no man with a functional world-view behaves wholly like a social functionary.

To be sure, Dr. Sanford stresses the doctrine that the social field or amoebalike entity of midtwentieth century America "encourages" individuality. That field is said to be dense with quasi-autonomous centers of action. If any statement ever called for semantic clarifi-

cation, this one does. The moral autonomy of American citizens today is by no means obvious to critics in many of the other democracies, including France and even the English-speaking nations. Ask any exchange scholar what the impression abroad is at present. We are familiar with the talk, the very sincere talk, in contemporary American education about "adjustment to a changing world." We are not aware that fundamental appraisal of trends within the social order is encouraged, or could easily be encouraged under the present circumstances of the increasing polarization of mankind. Of course, one would prefer being a self-adjusting cog in the machine (to change the figure of speech) to being a commissar-adjusted cog. I wonder, however, whether the Executive Secretary would contend that the self-adjustment of loyal functionaries is the same as the autonomy of ethically concerned, trend-judging citizens. Even while the amoeboidal entity does, as he points out, increase the nourishment for psychometrics, superficial psychotherapy, and human relations programs in industry and the armed forces, it limits nourishment for pure personality theory and pure sociology, and cuts off nourishment for value-oriented philosophy of personality and of society. Rather than encouraging personal autonomy in any full sense, the entity seems to encourage the myth of the self-justifying social machine, or rather the myth of the total rightness of one of the poles of a split personality.

There remain those who still look for sanctions elsewhere (perhaps they look "within" as this inner world of personality tries to answer to its widest and deepest matrix) and, in a word, still resist being polarized. I do not even believe that most American men of science as yet think of themselves as pure functionaries of an amoeboidal entity with a split personality. But there are many roads toward such a moral debacle, and those cool-headed ones who encourage us to think like mere functionaries are allied, quite paradoxically, with those hot-heads who would promote mass hysterias. I do not accuse our Executive Secretary of belonging to

that particular cool-headed group, for he has requested "American psychology" to appraise its prospects, functionally, and not just to take itself for granted.

I think he would agree that knowledge of the amoeboidal entity should culminate in a clinical interpretation of its own tensions. The necessity of adjusting to the field and the desirability of changing the field in order to facilitate more abundant personal living are by no means mutually contradictory. Ethically oriented adjustments are usually active, rather than being like those of the complacent functionary.

Man is the error-appraising, hence self-correcting animal. Methodology is possible only if the reasons for error be defined, rather than each error's being overcome by blind trial-and-error action. To understand fully the amoeboidal entity would include recognizing the points at which its structure is constituted by active ignorance. Actual functioning is not the measure of truth, but rather truth is the basis for improvement of functioning in the direction of the fulfillment of the values of free persons.

To sum up, while we agree that organismal and field-theoretical constructs may help us appraise the prospects of any profession, we deny that the trends which are found to prevail within the limits of any field in any sense legislate the aims of a profession. Psychology must correct error-based motivations at whatever level of power or of "sanctity" they happen to be found. To be an ethical person has as part of its intrinsic meaning the will to resist the invitation of the beast or amoeboidal entity or Lewinische field or self-justifying social machine (let each choose his own symbol) to fall down and worship it. The job of psychology is to criticize and improve the social order on every level of its functioning, rather than to adjust passively to some trends in order to grow fat on the pay for lower-level jobs.

ROBERT F. CREEGAN  
*Ohio University*

---

## Across the Secretary's Desk

---

### Psychology and the Law

On November 28 and 29 a special Committee of the American Association of Law Schools held a conference devoted to a discussion of psychological aspects of the law. The AALS is apparently seriously and concretely interested in feasible steps to bring the psychologist's skills and insights to bear on not only the form and content of legal training but also on the legal process itself. Topics discussed at the conference varied in level from that of delineating psychological assumptions underlying modern law to the psychological validity of the judge's intuitive convictions concerning a witness's credibility. In content the discussion ranged from the psychology of juries and the psychology of judges to the potential value of psychology courses for law students and current methods of grading students' performance.

The conference was attended by seven teachers of law in various universities, by Dr. Alan Gregg of the Rockefeller Foundation, by four psychiatrists and three psychologists (Wayne Dennis, Albert Pepitone, and Fillmore H. Sanford). From the psychologist's point of view it was an enlightened, productive, and humbling conference. It was enlightened because the lawyers were very bright, very articulate, and relatively very well informed about psychology. For example, they knew the difference between social, educational, and clinical psychologists; and many of them were able to talk well about the design of research. It was productive in that people—perhaps especially the psychologists—learned a great deal and seemed to get new and creative ideas about things. It was humbling—again especially for psychologists—because of the obvious fact that neither psychology nor psychiatry has anything approximating answers for the wide variety of problems the lawyers describe with skill, realism, and fervor. We might quote psychoanalytic theory or teach courses or extrapolate with great and necessary timidity from relevant areas of research, but the most and best we can offer is research—research on selection and training of lawyers, research on the decision-making process in juries, research on the public perception of the law and of lawyers, research on the intricate problem of deterrence. The lawyers—at least the

ones at this conference—seem ready to accept psychologists as research people and as teachers who might contribute to the general education of the lawyer. On this basis, lawyers and psychologists can establish a sound and mutually profitable collaboration. They probably will.

### The New Building

If history wants to bother, it will probably be able to record that the *American Psychologist* containing this paragraph was among the first APA mail to be delivered to 1333 Sixteenth Street N.W., Washington, D. C.

On the first of September we were assured by our architect and our contractor that we could move into the new building on October 15. Having been taught during the preceding months some degree of skepticism about such estimates, the House Committee advised the Central Office to plan on a November first exodus. By October 15, the plans were revised by a month. By November 15, another month had to be added. By early December we could see evidence that we were actually gaining on the moving date. Everybody is now neurotically skeptical about everything, but at the time of the present writing (December 10) we have nervously fixed upon December 30 as the date of occupancy.

The whole process has gone slowly and expensively, but, to accent the positive, which seems to be the only orientation conducive to the maintenance of sanity in such an operation, it will be a handsome and comfortable building. Psychologists who have seen it recently seem unanimously to feel a very marked and proper pride of ownership.

There ought to be some way the building could be taken on tour so that all members of the Association could have the opportunity to engage in some appropriate and compatible housewarming activity. Short of that, we here hope we can have a celebration for all psychologists in the Washington area. And we think we probably should have another fancy affair for the nonpsychological people in Washington with whom psychology and psychologists are involved in one way or another. This would be our way of gently telling Washington that



psychology, as science and profession, is firmly established as part of the national scene.

The Committee on the Building Fund met on November 20, elected George Bennett chairman, and made preliminary plans for raising money to pay for our property. It seems likely that a general appeal to all APA members will be made in the spring, after their taxes are paid and before summer peregrinations begin. Meanwhile, spontaneous contributions are coming in. Nobody seems inclined to send these back to their donors. We have received a total of about \$4,000, including \$1,000 from the Midwestern Psychological Association, to be used to purchase a conference table, appropriately labeled, for the Board room.

In accordance with the vote of the Council of Representatives, space has been reserved in the building for a library of psychological journals. So far we have all our own journals ready to go into the library and have received a gift from E. G. Boring of 34 bound volumes of a non-APA journal. Other than that, we have a good supply of bare shelves and a reading room naked of furniture.

#### 1953 Journal Subscriptions

For some years there has been a gradual decline in the percentage of our members who subscribe to those APA journals that are not distributed "automatically" to all members. Apparently this decline will accelerate in 1953. In order to check on the trend for the coming year, we pulled out 125 random record cards for members who have paid their dues and entered their subscriptions for the year. Seventy-four of these members voluntarily subscribed to no journals in either 1951 or 1952. Eighty-eight subscribe to no journals for 1953. Of the 51 who subscribed to at least one journal in 1952, seven subscribed to more in 1953, 27 to the

same number and 17 to fewer. Of the 37 out of the 125 who subscribe to one or more journals in 1953, only eight subscribe to all the journals (Club A) while 12 subscribe to only one. The 125 members subscribe to less than one journal apiece.

If these facts are substantiated when we analyze the journal buying of the whole membership, they will raise some serious questions. Some will want to worry about the reading habits and the general level of scholarship among APA members. Others will regard it very sad that so small a proportion of our members support, through subscription, APA efforts to forward scientific publication. Those concerned with the APA budget can probably start worrying now about the very real financial implications of these facts. It seems clear that an appreciable number of members are reacting to increased dues and increased subscription prices by dropping journals.

#### New Associates

In the last half of 1952 the Membership Committee, with the help of Jane Hildreth, examined 1,354 applicants for Associate membership in APA. Of this number, 1,205 were recommended to the Board and were elected. They became APA members on January 1, 1953. The 1,205 figure compares with 1,426 for 1952 and 1,370 for 1951. Thus our rate of increase slackens somewhat, but at the moment we are still headed for a membership of 60,000,000 a hundred years from now.

On November 30, 1952 our membership was 9,881. Of this number 1,536 were Fellows, 8,260 Associates, and 85 Life Members. The addition of 1,205 new members will give us 9,465 Associates and a total membership, barring deaths and resignations, of 11,086.

FILLMORE H. SANFORD

#### New APA Address and Telephone Number

Address: 1333 Sixteenth Street N.W.

Washington 6, D. C.

Telephone number: Columbia 5-0595

## Psychological Notes and News

L. William Johnson died of a heart attack on September 4, 1952 at the age of 48. He was school psychologist at the Maumee (Ohio) Valley Country Day School.

C. D. Keet died at Johannesburg, South Africa in October, 1952 after a long illness. He was 55 years old.

John L. Stenquist, director of the Bureau of Measurement, Statistics, and Research, of the Baltimore Department of Education, died November 8, 1952. He was 67 years old.

A. R. Gilliland, professor of psychology at Northwestern University, died of a heart ailment on November 30, 1952 at the age of 65.

Robert I. Watson, associate professor of psychology and assistant dean of the Medical School at Washington University, has joined the faculty of Northwestern University as professor of psychology. Professor Watson will teach and also will direct the graduate training program in clinical psychology.

Herbert S. Conrad has been appointed a consultant of the Public Advisory Board for Mutual Security to survey and appraise program-operations in the Mutual Security Agency. Other members of the survey team include an economist, a political scientist, and an engineer. The project is under the immediate direction of Kenneth L. Heaton.

Thelma G. Alper, formerly of Clark University, was appointed associate professor of psychology at Wellesley College, effective September 1, 1952. During the first semester of the academic year she has continued to teach one course at Clark, with the title of visiting lecturer.

Joel T. Campbell was appointed assistant director of Western Reserve University's Personnel Research Institute. He had been a research psychologist with the Personnel Research Section of the Adjutant General's Office, Department of the Army, since 1948. At PRI he will supervise all government research projects.

Paul R. Dingman left Brattleboro Retreat to take up duties as director of the Des Moines Child Guidance Center on November 15. Robert Gorell of Boston VA Hospital and Clark University, came to the Retreat on December 1 as chief psychologist. Current interns at the Retreat are Hugh Urban of Pennsylvania State College and Charles Kreidl of Catholic University.

Horacio J. A. Rimoldi, formerly director of the psychological laboratory of the University of Uruguay, has been appointed research associate at Educational Testing Service, Princeton, New Jersey.

Joseph Levi, formerly chief clinical psychologist of the VA Hospital, Bronx, New York, has completed a three-year research study on "Psychiatric Aspects of Rehabilitation," a grant from the Commonwealth Fund. He was appointed to teach projective techniques at the Yeshiva University. He will also conduct advanced courses in the Rorschach technique.

Fred Brown has been appointed adjunct professor of psychology, New York University, School of Liberal Arts and Sciences, New York City.

Rohrer, Hibler & Replogle announces the following appointments to their staff effective November 1, 1952: James W. Rohrer, to their New York regional office; Dilman J. Doland to their Cleveland office; and Earl E. Swartzlander to their Atlanta regional office.

Henry A. Imus has completed a year's service as scientific liaison officer in the field of psychology, London Branch of the Office of Naval Research, and has returned to his duties as head of the Physiological Psychology Branch, Psychological Sciences Division, Office of Naval Research in Washington, D. C.

Mungo Miller is currently in the State Department Exchange Program in Germany as an expert in public opinion methods and findings. He is visiting German opinion and market research agencies and universities to talk about recent work in this field.

**William B. Haber** has been appointed clinical psychologist on the psychiatry service at the Hospital for Joint Diseases, New York City.

**Henry J. Zagorski** was appointed staff assistant with the Chesapeake and Ohio Railway Company, Cleveland, Ohio, effective November 6, 1952.

**Victor H. Denenberg** is now working as a research associate for HumRRO at Army Field Forces Human Research Unit No. 1, Fort Knox, Kentucky.

**Robert L. McFarland** has recently been appointed research and administrative associate, Clinical Psychology Service, VA Hospital, Palo Alto, California. He was formerly assistant director of research and psychology, Psychiatric Institute of the Municipal Court, Chicago, Illinois.

**Harry Beilin**, formerly associated with Teachers College, Columbia University and other New York State institutions, has been named head of the guidance and counseling program at the University of Connecticut. He takes the place of DWane Collins, now on leave to direct the guidance and personnel program for the Brazilian government and the Aeronautical School in Sao Jose de Compos.

**Harold Kenneth Fink** has transferred his psychoanalytic offices to La Jolla, California, and has accepted a place on the staff of the Balmer School, La Jolla's nursery school.

**Sidney J. Fields** has joined the staff of the department of psychiatry of the University of Arkansas School of Medicine as instructor in clinical psychology. **Marguerite Kyer** is employed as assistant, and **Edmond F. Erwin** continues as assistant professor and administrative director of the department, which is headed by William G. Reese, M.D., psychiatrist, formerly at The Johns Hopkins University.

**George F. Cassidy**, formerly assistant clinical psychologist at St. Vincent's Hospital, New York City is now clinical psychologist at St. Vincent's Retreat, Harrison, New York.

**Herman D. Behrens** resigned his position as professor of education, the State Teachers College, Geneseo, New York, and accepted the position of professor of education in charge of human develop-

ment at the State University Teachers College, Oneonta, New York. This change became effective September 1, 1952.

The U. S. Naval School of Aviation Medicine, Pensacola, Florida, has announced several recent personnel changes. **Comdr. Alan D. Grinsted**, MSC, USN, has left the School of Aviation Medicine to replace **Comdr. Verne Lyon**, MSC, USN, as coordinator of research for the Chief of Naval Air Training, Pensacola, Florida. **Comdr. Lyon** replaced **Lt. Joseph F. Snyder** as head of the Aviation Psychology Branch, Division of Aviation Medicine, Bureau of Medicine and Surgery, Department of the Navy, in Washington, D. C. **Lt. Snyder** has assumed duties in the research laboratory at the School of Aviation Medicine. **Lt. Comdr. William F. Madden**, MSC, USN, has replaced **Comdr. Grinsted** as assistant director of research at the School. **Lt. (jg) Edwin P. Hollander**, MSC, USNR, has returned to the psychology laboratory at the School of Aviation Medicine after a tour of duty at Columbia University where he completed his doctoral degree.

**Herbert S. Conrad** has recently been elected chairman of the APA's Council of Editors.

The list of officers of the Division on Maturity and Old Age, published in the November *American Psychologist*, should have included the name of **Ross A. McFarland** as a Member-at-large of the Executive Committee for the term 1951-54. **Robert J. Havighurst**, who is also a Member-at-large of the Executive Committee, was elected for the term 1952-55.

The U. S. Naval Personnel Research Unit (NavPRU), San Diego, was recently established by the Bureau of Naval Personnel to provide research facilities for fleet installations. The Unit has announced the appointment of the following psychologists to its staff. **Edmund E. Dudek**, formerly with University of Washington, is the chief scientist. **Leonard V. Gordon**, formerly with University of New Mexico, is head of the Classification Research Branch; **Kenneth W. Eells**, formerly with San Diego State College, is head of the Classification Research Section. In the Training Research Branch, **Earl I. Jones**, formerly with HRRC, Lackland Air Force Base, is head of the Training Requirements Section; and **Herman**



Roemmich, formerly with the Naval Electronics Laboratory, is head of the Training Evaluation Section. Albert B. Chalupsky, formerly with Purdue University, has been appointed project director in the Occupational Research Branch. Military personnel assigned to NavPRU include Lt. (jg) James S. Ford, formerly with University of Southern California; Lt. (jg) Donald C. Kuhn, formerly with Ohio State University; and Lt. (jg) Warren S. Torgersen, formerly a research associate of the Social Science Research Council.

Psi Chi, national honorary society in psychology, has announced that Anna Y. Martin of New Mexico Highlands University has been appointed for a one-year term as vice-president of the Rocky Mountain Region; and Max Meenes of Howard University has been appointed for a one-year term as vice-president of the Eastern Region.

Emory University announces the establishment of the Psychology Primate Laboratory. The laboratory will occupy air-conditioned quarters especially designed for the housing of primates and the testing of their behavior. These facilities will offer opportunity for staff research and student instruction and research in problems of primate behavior. A. J. Riopelle will be in charge of the laboratory.

The Rye Public Schools, Rye, New York, have initiated a pilot program for education in human relations and mental health. The object of this program, of which Kenneth Helfant is director, is to assist teachers, administrators, and other school personnel in applying mental health principles to their jobs with the schools. So far the program has consisted of bimonthly seminars with elementary and high school teachers, a parent education course, and individual consultations with parents and teachers. The eventual goal of the program is to introduce into the curriculum an integrated series of experiences designed to give pupils an increased understanding of their own behavior and the behavior of others.

The American Psychosomatic Society has changed the dates of its coming annual meeting to April 18 and 19, 1953.

The Society for the Psychological Study of Social Issues and the Society for the Study of Social Problems will hold a joint conference on February 14 and 15 at New York University. The speaker for Saturday evening will be Walter H. C.

Laves, former Deputy Director General of Unesco and present chairman of the United States National Commission for Unesco.

The department of psychology at the University of Nebraska has announced two symposia on the general topic of "Current Research and Theory in Motivation." These symposia have been made possible through a grant from USPHS. The first symposium will be held on January 15 and 16. Leo J. Postman will read a paper on "Motivation as a Factor in Perception," Harry F. Harlow, on "The Role of Motivation in the Acquisition of New Responses," and Judson S. Brown, on "Learned Drives." The second symposium will be held on March 26 and 27. Vincent Nowlis will read a paper on "The Role of Motivation in Personality Development," O. H. Mowrer, on "Motivation as a Factor in Psychotherapy," and Theodore M. Newcomb, on "Motivation in Social Psychology." On each of the first three half-days of each meeting, one paper will be read and discussed. On the final half-day, the three major participants will take responsibility for leading a general discussion on the papers presented in that meeting. Both meetings will be open to any interested psychologists. Anyone wishing assistance in making hotel or motel reservations should write to Professor Don W. Dysinger, Chairman, Psychology Department, University of Nebraska, Lincoln, Nebraska.

The department of psychology at the University of Kentucky is planning a symposium on relationships between learning theory, personality theory, and clinical research. The two-day program scheduled for March 13 and 14, 1953 will feature a number of distinguished specialists in each of the three areas, who will represent their viewpoints by both individual and panel discussions. Additional information may be obtained by writing to Dr. Robert E. Bills, Chairman, Symposium Committee, Department of Psychology, University of Kentucky, Lexington, Kentucky.

The *Journal of Clinical and Experimental Hypnosis*, a quarterly publication of the Society for Clinical and Experimental Hypnosis, is now accepting papers for publication. The journal will publish only original research dealing with hypnosis in psychology, psychiatry, medicine, dentistry, and allied behavior sciences. Papers should be submitted to Dr. Milton V. Kline, Editor, 500 Riverdale Avenue, Yonkers, New York.

A number of graduate and postdoctoral fellowships for research in personality are offered by the University of Illinois, under a grant from the Ford Foundation. The graduate fellowships (\$1,200 for the academic year) afford an opportunity for both course work and association with a member of the staff engaged in personality research. The postdoctoral fellowships (\$4,500 a year) offer an opportunity for study and research either independently or in collaboration with staff members in cultural anthropology, education, psychology, and sociology. The program is under an interdisciplinary committee from these fields with Lyle H. Lanier as chairman. Inquiries should be directed to J. McV. Hunt, Department of Psychology, University of Illinois, Urbana, Illinois, as administrative secretary of the program.

The Roscoe B. Jackson Memorial Laboratory offers two summer research fellowships in the Division of Behavior Studies for interdisciplinary work in the biological and social sciences. The PhD degree is required, and the stipend is \$600 plus an allowance for research expenses. Applications should be sent to Dr. J. P. Scott, Box 847, Bar Harbor, Maine, not later than February 1, 1953.

#### CURRENT RESEARCH

A program of psychobiological research with three baby lowland gorillas is in progress at the Zoological Garden of San Diego, California. The project, initiated in 1949 soon after the arrival of the gorillas, was carried on for two years at the Hospital-Laboratory of the zoo, and for the past six months has continued in the zoo proper, combining exhibition with research. A diary record of growth and development is being kept, as well as data on performance in specific experimental situations. Joan Morton Kelly, assisted by other members of the zoo staff, is primarily responsible for carrying out the study. Robert M. Yerkes is acting as consultant.

A research project on the male self-concept during puberty is being conducted by Walter D. Smith and Dell Lebo of Florida State University, with the cooperation of the Leon County, Florida, Public Schools.

A study of the meaning of results obtained from opinion surveys of Ford employees is being carried out by the Ford Motor Company in con-

junction with Jay L. Otis, of Western Reserve University, and Elmo Roper. The research plan includes two phases: (a) a factor analysis of the relationships of the answers to the many questions in the survey questionnaire, and (b) an effort to determine which factors of morale are of greatest importance in determining over-all satisfaction of employees.

The U. S. Naval Personnel Research Unit, San Diego, California has recently initiated several research projects. These projects, with the specific studies and the personnel involved, are listed below.

#### *Analysis of Navy jobs*

An analysis of all Navy battle and emergency jobs: A. Chalupsky, P. Athan, and F. S. Dam.

A procedural analysis of antisubmarine equipment maintenance and operation: F. S. Dam.

#### *Development and validation of selection and classification techniques for special Navy billets*

Validation of the Navy Radio Code Aptitude test: L. V. Gordon and W. Torgerson.

Development of a test of understanding of relative movement: K. Eells.

Development of a biographical information blank for selection of personnel for specialized training: K. Eells and R. Shirk.

#### *Development of selection and training criteria*

Investigation of relationships among aptitudes and school and shipboard measures of sonarman performance: A. V. Anderson.

Evaluation of sonarman performance during sea phase training: W. Torgerson.

Development of a test of underwater target detection and classification: H. Roemmich and J. Ford.

Development of measures of antisubmarine warfare team performance: M. Angell, R. Gavin, and D. Kuhn.

Development of achievement measures for sonar operator and maintenance personnel: A. J. Stauffer and A. V. Anderson.

Evaluation of rating techniques for criterion purposes: A. V. Anderson and L. Swanson.

Determination of training requirements for maintenance of antisubmarine equipment: E. I. Jones.

Development of measures of progress of training: E. I. Jones.

# Convention Calendar

- American Psychological Association:** September 4-9, 1953; Michigan State College  
*For information write to:*  
 Dr. Fillmore H. Sanford  
 1333 Sixteenth Street N. W.  
 Washington 6, D. C.
- Ontario Psychological Association:** January 30-31, 1953; London, Ontario  
*For information write to:*  
 Mr. Roy A. Ross  
 100 St. George St.  
 Toronto 5, Ontario, Canada
- New York State Psychological Association:** January 30-31, 1953; New York City  
*For information write to:*  
 Dr. Percival M. Symonds  
 Teachers College  
 Columbia University  
 New York 27, N. Y.
- American Orthopsychiatric Association:** February 23-25, 1953; Cleveland, Ohio  
*For information write to:*  
 Miss Elizabeth Charleton  
 American Orthopsychiatric Association  
 303 Lexington Avenue, Room 210  
 New York 16, N. Y.
- Child Study Association of America:** March 2-3, 1953; New York, New York  
*For information write to:*  
 Child Study Association of America  
 132 East 74th Street  
 New York 21, New York
- Optical Society of America:** March 19-31, 1953; New York, New York  
*For information write to:*  
 Professor Arthur C. Hardy  
 Room 8-203  
 Massachusetts Institute of Technology  
 Cambridge 39, Massachusetts
- Inter-Society Color Council:** March 18, 1953; New York, New York  
*For information write to:*  
 Mr. Ralph M. Evans  
 Inter-Society Color Council  
 Color Control Division, Bldg. #65  
 Eastman Kodak Company  
 Rochester 4, New York
- American Personnel and Guidance Association:** March 29-April 2, 1953; Chicago, Illinois  
*For information write to:*  
 Executive Secretary  
 American Personnel and Guidance Association  
 1534 "O" Street N. W.  
 Washington 5, D. C.
- Southern Society for Philosophy and Psychology:** April 3-4, 1953; Austin, Texas  
*For information write to:*  
 Dr. Oliver L. Lacey  
 Department of Psychology  
 University of Alabama  
 University, Alabama
- National Association of Student Personnel Administrators:** April 6-9, 1953; East Lansing, Michigan  
*For information write to:*  
 Dean Tom King  
 Michigan State College  
 East Lansing, Michigan
- International Council for Exceptional Children:** April 8-11, 1953; Boston, Massachusetts  
*For information write to:*  
 Harley Z. Wooden, Secretary  
 1201 Sixteenth Street N. W.  
 Washington 6, D. C.
- Illinois Psychological Association:** April 11, 1953; Chicago, Illinois  
*For information write to:*  
 Professor George S. Speer  
 Institute for Psychological Services  
 3329 South Federal Street  
 Chicago 16, Illinois
- American Psychosomatic Society:** April 18-19, 1953; Atlantic City, New Jersey  
*For information write to:*  
 Miss Joan K. Erpf  
 American Psychosomatic Society  
 551 Madison Avenue  
 New York 22, New York
- Eastern Psychological Association:** April 24-25, 1953; Boston, Massachusetts  
*For information write to:*  
 Dr. G. Gorham Lane  
 Department of Psychology  
 University of Delaware  
 Newark, Delaware
- Midwestern Psychological Association:** May 1-2, 1953; Chicago, Illinois  
*For information write to:*  
 Dr. Lee J. Cronbach  
 Bureau of Research and Service  
 University of Illinois  
 1007½ South Wright Street  
 Champaign, Illinois
- American Psychiatric Association:** May 4-9, 1953; Los Angeles, California  
*For information write to:*  
 Dr. Cullen Ward Irish  
 1930 Wiltshire Boulevard  
 Los Angeles 5, California
- Acoustical Society of America:** May 7-9, 1953; Philadelphia, Pennsylvania  
*For information write to:*  
 Dr. Harry F. Olson  
 RCA Laboratories  
 Princeton, New Jersey
- Pennsylvania Psychological Association:** May 9, 1953; Harrisburg, Pennsylvania  
*For information write to:*  
 Dr. William U. Snyder  
 Department of Psychology  
 Pennsylvania State College  
 State College, Pennsylvania
- American Association on Mental Deficiency:** May 12-16, 1953; Los Angeles, California  
*For information write to:*  
 Dr. Neil A. Dayton  
 P. O. Box 96  
 Willimantic, Connecticut
- Western Psychological Association:** June 18-20, 1953; Seattle, Washington  
*For information write to:*  
 Dr. Richard Kilby  
 Department of Psychology  
 San Jose State College  
 San Jose, California
- Association Internationale de Psychotechnique:** July 27-August 1, 1953; Paris  
*For information write to:*  
 Pr. R. Bonnardel  
 41, rue Gay-Lussac  
 Paris 5\*, France



Graduate Programs in Psychology  
Leading to the M.A. and Ph.D. Degrees

## EMORY UNIVERSITY

**Major Emphasis is placed on General, Experimental,  
Comparative, and Physiological Psychology.**

M.A. scholarships and fellowships, \$525-\$1225-\$1500; for Ph.D. \$1525-\$2000-\$2650. Teaching assistantships, \$1500. Special two-year tuition grants for cooperative program leading to M.A. in speech correction offered by Atlanta Junior League School for Speech Correction.

Graduate Record Examination Scores Are Required.

*For information concerning admission, fellowships and  
assistantships, write the*

CHAIRMAN OF THE DEPARTMENT OF PSYCHOLOGY  
P. O. BOX 2, EMORY UNIVERSITY  
EMORY UNIVERSITY, GEORGIA

→ ANNOUNCING

*The Coming Publication of*

→ THE FOURTH EDITION

*of Psychology and Life*

*and Working with Psychology*

by FLOYD L. RUCH

Both text and workbook will be available for your consideration this Spring

**SCOTT, FORESMAN AND COMPANY**

Chicago

Atlanta

Dallas

New York

San Francisco

### ***Again Available***

## **SYMPOSIUM: PSYCHOANALYSIS AS SEEN BY ANALYZED PSYCHOLOGISTS**

This well-known symposium, which first appeared in the *Journal of Abnormal and Social Psychology* in 1940, has now been reprinted. The contributors are Edwin G. Boring, Carney Landis, J. F. Brown, Raymond R. Willoughby, Percival M. Symonds, Henry A. Murray, Else Frenkel-Brunswik, David Shakow, and Donald V. McGranahan. Comments on the symposium are made by Hanns Sachs and Franz Alexander. 160 pages.

Price, \$2.00

*Order from*

**American Psychological Association**  
1333 Sixteenth Street N. W.  
Washington 6, D. C.

## **Subscription Lists**

### **MEMBERS AND STUDENTS**

*Approximately 12,500 names*

The address list of members and participants in the Student Journal Group of the American Psychological Association is available at the prices indicated below, provided its proposed use is approved by the Association.

Envelopes addressed .....	\$50.00
(advertiser furnishes envelopes and pays express charges)	
Addresses on tape, not gummed .....	\$25.00
(suitable for a mailing machine)	

### **STATE LISTS**

The total number of names on the list determines its price

### **SUPPLEMENTARY LISTS**

*Approximately 3,500 names in total list*

*Individual journal lists vary from 500 to 1,700*

The Association also maintains a list of non-member subscribers to its journals (universities, libraries, industrial laboratories, hospitals, other types of institutions, and individual subscribers). The single list of all subscribers approximates 3,500 names; individual lists for each journal, with more specialized circulation, vary from 500 to 1,700.

For any one journal, envelopes addressed .....	\$15.00
For any one journal, addresses on tape .....	\$10.00
For all journals, envelopes addressed .....	\$20.00
For all journals, addresses on tape .....	\$15.00

*For further information, write to*

**American Psychological Association**  
1333 Sixteenth Street N. W.

Washington 6, D. C.

## NEWEST AID TO PSYCHOLOGISTS!



End drudgery of longhand-copying and proofreading notes. Contoura-copied manuscripts, bound abstracts, reviews, reports, and articles are letter-perfect, need no checking.



Authenticate research data with genuine copies of documents, charts, graphs, tables, and drawings up to  $8\frac{1}{2}'' \times 14''$ . Contoura gives you evidence to back your claims.



Make record copies of research notes right from test-finding lab notebook, longhand memos, sketches, projected ratings and verified readings. Accurate!



Copy excerpts, or entire pages up to  $8\frac{1}{2}'' \times 14''$ , from non-circulating books without lugging heavy volumes to photo copy company. Contoura-copy on-the-spot... Contoura is exact!

YOU CAN...with the NEW



**TRULY PORTABLE!** Light, compact; carry in briefcase. Use it anywhere. **COPIES ANYTHING** written, printed, or drawn up to  $8\frac{1}{2}'' \times 14''$  whether ink, pencil or crayon... even if on both sides, including tightly bound, curved pages! **EASY TO USE.** No experience nor darkroom needed; use under normal incandescent lighting. **ELIMINATES ERRORS** of longhand-copying, typing, and proofreading! **SIMPLIFIES RESEARCH.** Contoura rids complications of working with single copies that can't be taken from records or libraries. Saves time, money, effort, errors. Guaranteed. Write for free folder now.

\* TWO MODELS: \$39 & \$59 \*

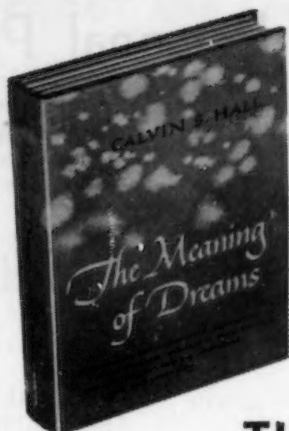


344 High Street

Deep River, Conn.

*Important for laymen*

*and a  
working aid  
for the  
professional  
psychologist*



## THE Meaning of Dreams

By CALVIN S. HALL

Professor of Psychology,  
Western Reserve University

**T**HIS book represents the results of an attempt, through analysis of the dreams of normal people, to develop the possibility of the man-in-the-street's learning to use his dreams as a reliable guide to better self-understanding and improved relations with others. It is the author's thesis that the ordinary man can learn to use his dreams as the starting point for additional creative thinking about his personal problems.

DR. HARRY A. OVERSTREET, author of *The Mature Mind*, says: "Dr. Hall opens doors to ourselves that mostly remain closed. Now as we waken from our own dreams, we can begin to sense what they suggest about ourselves. This is a high service to our self-understanding."

*Indexed. \$3.00*

*At your bookstore, or from*

**HARPER & BROTHERS**

49 East 33rd Street, New York 16, N.Y.



*For the high school guidance program*

## **Gordon Personal Profile**

By *Leonard V. Gordon*

A brief measure, employing the forced-choice technique, of five aspects of personality that are important in determining adjustment of the individual in scholastic situations.

## **Watson-Glaser Critical Thinking Appraisal**

By *Goodwin Watson*  
& *Edward M. Glaser*

For both reliable evaluation and effective teaching. Five subtests cover Inference, Recognition of Assumptions, Deduction, Interpretation, and Evaluation of Arguments.

## **Holzinger-Crowder Uni-Factor Tests**

By *Karl J. Holzinger*  
& *Norman A. Crowder*

A new multi-factor battery for grades 7-12 yielding measures of verbal, spatial, numerical, and reasoning factors of mental ability.

## **Sims SCI Occupational Rating Scale**

By *Verner M. Sims*

A brief, handy method of determining individual social class identification as a basis for investigation into its possible relation to such personality factors as adjustment, intelligence, aptitudes, interests, and motivation generally.

## **Occupational Information for Counselors**

By *Harold J. Mahoney*

A summary of expert opinion as to the content essential to the basic preparation of secondary school counselors. A valuable guide for the in-service counselor. Kraft. viii plus 70 pages.



# **WORLD BOOK COMPANY**

Yonkers-on-Hudson  
New York

2126 Prairie Avenue  
Chicago 16

*Spring*  
1953

## DESIGN AND ANALYSIS OF EXPERIMENTS IN PSYCHOLOGY AND EDUCATION

**E. F. Lindquist**

*State University of Iowa*

This is a new book which is written primarily to help students and research workers select or devise appropriate designs for the experiments they may have occasion to perform. The "experimental design" approach used in the text (planning of a piece of research or experiment in terms of the best statistical techniques which can be applied to the research) enables the student to devise for himself the particular designs needed in specific situations, or to modify or combine the "standard" designs and analytical procedures.

Boston      New York      Chicago  
Dallas      San Francisco

*Houghton Mifflin Company*

### IMPORTANT NEW PSYCHOLOGY TEXTS

#### **Skinner—Science and Human Behavior**

A book on human behavior for introductory psychology classes, this first develops a rigorous set of terms, concepts and laws, and then uses it to analyze the practical fields of human behavior. In a non-theoretical manner it discusses the conditions and influences upon which human behavior depends and includes areas not usually included in introductory texts. The formulation is applied to social behavior and social relation, and explicit analyses are made of current problems in government, religion, psychotherapy, economics and education. *Ready in January*

#### **Baker—Introduction to Exceptional Children** revised edition

This new revised edition presents descriptive backgrounds of all types of handicapped and exceptional children, which includes characteristics, the number of cases, methods of diagnosis, causes and preventions, history of treatment and present trends. Features of the revision are a summary of important findings of Terman in longitudinal studies of gifted children carried into adult life, new research on epilepsy and various other convulsive disorders, up-to-date bibliographies and references, and several new illustrations. *Ready in March*

**The Macmillan Company**

**60 Fifth Ave., New York 11**



## **INDUSTRIAL PSYCHOLOGY, 3rd Edition**

By **JOSEPH TIFFIN**, *Purdue University*

The third edition of this popular text expands treatment of such subjects as personnel data in relation to job success; criteria of job success; factors related to accident frequency and severity; application of the Taylor-Russell Tables. It adds new topics: patterned interview; forced choice and paired comparison merit rating system; visual requirements of job families.

640 pages 5½" x 8½"

## **READINGS IN EXPERIMENTAL INDUSTRIAL PSYCHOLOGY**

Edited by **MILTON L. BLUM**, *Assoc. Professor of Psychology and Sub-Chairman, Dep't of Psychology, School of Civic and Business Admin., City College of New York*

This collection of articles shows how psychologists use a variety of techniques to obtain objective data on numerous problems concerned with man and his work. The student practically looks over the shoulders of the investigators as they apply the experimental method to observed facts and draw their conclusions. Covers 5 areas of industrial psychology: Personnel Problems—Human Relations—Engineering Psychology—The Consumer and Advertising—Newer Concepts.

455 pages 6" x 9" November 1952

## **APPLIED PSYCHOLOGY—Abridged Edition**

By **HAROLD E. BURTT**, *Professor of Psychology and Chairman of Department of Psychology, Ohio State University*

Shortened by half and accelerated in readability, this version of Burt's APPLIED PSYCHOLOGY (see below) is designed for an average college course. It adequately covers applications in education, medicine, law and business—omits marginal material which is treated comprehensively in the original.

Complete re-writing (short sentences, conversational style) brings this edition within the quick-reading range of students. Technical points are explained as they arise. The discussion moves forward with well-chosen examples.

The Abridged Edition shows the student what psychologists are doing in a practical way in public schools, clinics, social agencies, juvenile courts, employment agencies, factories, and business offices.

465 pages 5½" x 8½" July 1952

## **APPLIED PSYCHOLOGY**

By **HAROLD E. BURTT**, *Ohio State University*

A highly readable text which combines experimental and clinical approaches to describe in intelligible style the contributions of psychology to American culture. Called an exceptionally adequate description of psychology at work in its currently most important fields, the treatment embodies an organization and analysis of all major research. It is distinctive in integrating various fields as well as in covering particular areas.

821 pages 6" x 9" 1948

*Send for your copies today*

**PRENTICE-HALL, INC.**

**70 FIFTH AVENUE**

**NEW YORK 11, N. Y.**



